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THE RETROBATES

WHAT'S YOUR FAVOURITE RUN-AND-GUN GAME?

DARRAN JONES

It's a choice for me between *Contra III: The Alien Wars* and *Contra: Hard Corps*. Both titles are amazing in their own ways and I can't choose one over the other.

Expertise:
Juggling a gorgeous wife, two beautiful girls, one SNES-loving cousin and an award-winning magazine, all under one roof!

Currently playing:
Red Dead Redemption: Undead Nightmare

Favourite game of all time:
Strider

DREW SLEEP

I used to like playing a lot of run-and-gun Flash games, like *Thing Thing*. In IT lessons, we'd go to German game websites to hoodwink the school's web filter!

Expertise:
Levelling up and moving on. Working full-time on this mag has been a blast. Thanks, everyone. You'll still see me around as a freelancer!

Currently playing:
Destiny 2: Beyond Light

Favourite game of all time:
Final Fantasy VIII

NICK THORPE

I'd have to pick *Metal Slug X* – it's hard to argue against the ridiculous carnage and SNK's exquisite pixel art.

Expertise:
Owning five Master Systems and a Mark III

Currently playing:
The Last Blade: Beyond The Destiny

Favourite game of all time:
Sonic The Hedgehog

ANDY SALTER

The only retro run-and-gun I can remember playing is *The Terminator* for the Mega Drive… from what I remember, Kyle Reese kills more police than the Terminator during the police level!

Expertise:
Modding games, no 'vanilla' versions for me, thanks!

Currently playing:
Fallout Frost

Favourite game of all time:
Rome: Total War

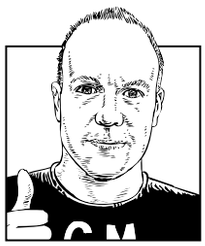
PAUL DRURY

Turrican, and particularly its sequel, were two of my favourite C64 games of any genre. More recently, I thought *Alien Hominid* was an excellent run-and-gun game, too.

Expertise:
Falling pianos

Currently playing:
Quantum

Favourite game of all time:
Sheep In Space



GRAEME MASON

One of the first, and toughest: Capcom's *Commando*, and the home Spectrum conversion by Elite.

Expertise:
Adjusting the tape azimuth with a screwdriver

Currently playing:
Until Dawn

Favourite game of all time:
Resident Evil 4

IAIN LEE

Commando on the BBC Micro. Absolute dog of a conversion but my tape had a glitch so it would take ages to load. Means I appreciated it much more.

Expertise:
Buying overpriced stuff on eBay then never touching it

Currently playing:
Need For Speed Payback

Favourite game of all time:
Elite (BBC Model B)

HARETH AL BUSTANI

I could never walk past a *Metal Slug* arcade machine without playing it, what a masterpiece!

Expertise:
Juggling obscure games, words and guitar, and seeing where it all lands

Now playing:
Fire Pro Wrestling World

Favourite game of all time:
The Secret Of Monkey Island

MARTYN CARROLL

The original *Contra* on Game Boy. I overlooked it when it was first released due to the *Probotector* PAL title, but later picked it on a Konami collection. It's absolutely perfect for a quick blast.

Expertise:
Sinclair stuff

Currently playing:
Trials Rising

Favourite game of all time:
Jet Set Willy

LOADING...

'll never forget the first time I experienced *Turrican*. I was visiting a friend's house and he was playing it on his C64. It looked absolutely phenomenal and it had the kind of slick controls and aesthetics that you'd typically see in an arcade game. Sadly, when I was eventually able to play the Amstrad port, it was nowhere near as good, and *Turrican* became one of those titles that made me envious of my C64-owning friends.

I wouldn't own a *Turrican* game myself until the release of *Super Turrican* on the SNES, and it's a game I have very fond memories of. Sadly, it's no longer in my collection, but that's most likely going to change, thanks to the recent reissues by Strictly Limited Games, which is working closely with Factor 5 now it has reacquired the licence. Julian Eggebrecht's anecdotes about the series not only fill in some of my own gaps, but make me remember why I loved the games in the first place, and it's always a pleasure to chat to legends like Julian as their passion remains obvious.

And passion has been important lately, as we find ourselves in another lockdown and with more time to spend with our retro gaming hobby. Keep your letters coming in, take advantage of our great subscription offer on page 28, and let us know what you think of the My Retro Life and Hot Topic articles we recently introduced, because let's face it, **Retro Gamer** would be nothing without the loyal readers that keep us going.

Stay safe and enjoy the magazine.

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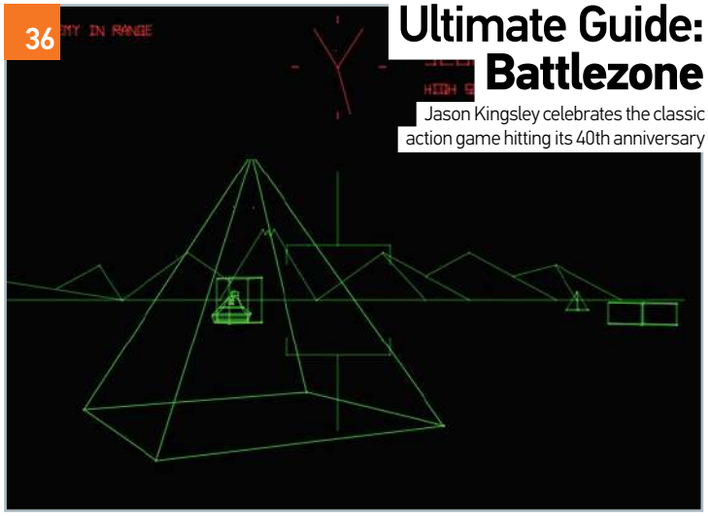

Ultimate Guide: Battlezone
Jason Kingsley celebrates the classic action game hitting its 40th anniversary

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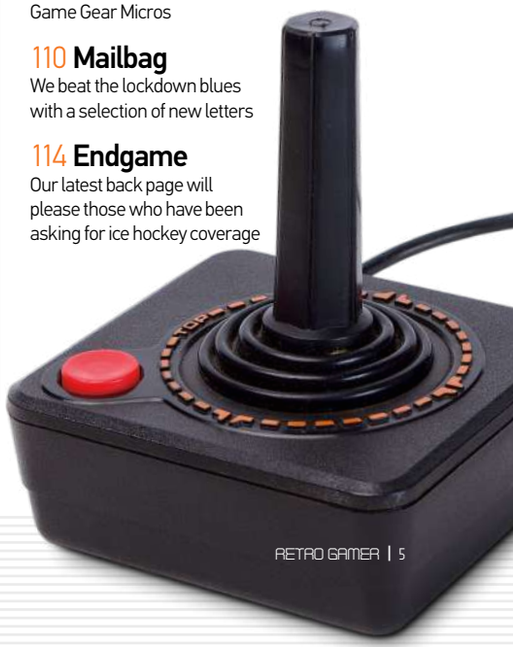
Retro Gift Guide 2020

If you're looking for things to buy for loved ones, or just fancy treating yourself in the New Year, you'll find this list essential



» The two colour units both look great, with the modern minimalist take on the original that we've come to expect from Analogue.

» Analogue's CEO Christopher Taber is confident the Duo will excite PC Engine fans.

DUO LIKE THE SOUND OF THIS?

The PC Engine is next for the Analogue treatment

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Nick takes a tumble back in time to when a certain retro gaming magazine first hit store shelves

If anyone's having a good 2020, you'd have to say it's PC Engine fans. Konami's official PC Engine Mini came out earlier in the year and was well-received, and Playmaji's Polymega multi-console finally made it into the wild, with support for NEC's tiny console. Now Analogue, not content simply to work on the upcoming Pocket console, has recently announced the Duo. This project is a home console compatible with games for the PC Engine and TurboGrafx range of systems, and like the original PC Engine Duo, includes both a HuCard slot and CD-ROM drive. As with Analogue's previous consoles, the Duo is powered by FPGA (field-programmable gate array) technology, which is a reconfigurable chip that can be made to act as if it were the chips in the original console. This allows for greater compatibility with original hardware and software than is possible with software emulation.

» The Analogue Duo takes plenty of design cues from NEC's PC Engine Duo, the first console to consolidate the PC Engine and its CD-ROM drive into a single unit.

To find out why Analogue decided to tackle the PC Engine, we spoke to CEO Christopher Taber. "I really love NEC's history, games and systems. Sadly, they never got anywhere near the love they deserve. I'd say they are probably the greatest, underappreciated videogames systems," he tells us. "Analogue Duo is designed to be the ultimate way to explore nearly all of NEC's history, and for most people it's gonna be their first introduction to this piece of videogame history." Like the Super Nt and Mega Sg before it, the Duo takes visual design cues from the original console – in this case, the PC Engine Duo specifically, as you can see from the wave pattern along the edges and the orientation of the HuCard slot and CD drive.

» [PC Engine] We're always keen on having more ways to play *Castlevania: Rondo Of Blood*.

Two different colour schemes are available, the black US version and white Japanese version. Original HuCards, CDs, controllers and accessories are supported, and the system offers HDMI output with the kind of scaling and scanline options that Analogue's previous consoles have also featured.

Under the hood, the Duo is a little different from Analogue's previous products – for example, while original Mega-CD hardware was supported on the Mega Sg, the Duo actually includes the CD-ROM drive. "TurboGrafx CD was the first CD-based videogame system ever released, so naturally Duo

» There's a headphone jack but, like the original, only one wired controller port – though multitaps will undoubtedly work on the Duo.

» NEC's range of games is also heading to the Analogue Pocket, which is great news for anyone that misses their TurboExpress.

is Analogue's first CD system," Christopher explains. One key difference to the original hardware is that rather than using a top-loading CD tray, the console uses a front-loading slot. "It is a design decision to meet two goals: simplify Duo in its aesthetics and optimise reliability and durability," Christopher tells us. Additionally, while previous Analogue consoles utilised small dongles for the connection of wireless controllers, the Duo is the first to build the receiver directly into the console and support USB controllers. "All Analogue systems in the future will be designed with Bluetooth, 2.4GHz, wired and original controller ports," Christopher explains. "We want every user to be able to connect how they prefer, as well as being able to use virtually any controller."

One of the major goals of the Duo is to simplify a complex console ecosystem. "Duo supports nearly all of NEC's entire videogame history, and for a lot of people it is going to be their first time exploring most of it. Duo supports every system, game and format (everything except PC-FX). NEC is famous for having a lot of different formats and special cards needed to support everything," says Christopher. Indeed, due to the modular nature of the console with its CD-ROM drive and System Card upgrades, not to mention the ill-fated SuperGrafx experiment, no single piece of original hardware is capable of playing the entire software library.

» The Analogue Duo promises to be an all-in-one solution for all of your PC Engine and TurboGrafx needs, with full modern luxuries to boot.

> **"I'd say they are probably the greatest, underappreciated videogames systems"**
>
> Christopher Taber

"Duo consolidates all of this into one system," says Christopher. "You don't need any special cards or add-ons. It plays everything right out of the box. TurboGrafx-16, PC Engine, SuperGrafx, TurboGrafx CD, PC Engine CD-ROM, Super Arcade CD-ROM."

The Duo won't be the only Analogue console to support NEC's library, either. As we mentioned earlier, the company is also working on the Pocket, a portable console with support for a variety of classic handheld game formats. At the time of announcement, these included the Game Boy and Game Boy Advance out of the box, and the Lynx, Game Gear and Neo Geo Pocket via adaptors. Now Analogue has confirmed that the Pocket will also be host to a HuCard adaptor, allowing it to play games for PC Engine and TurboGrafx. We had to know if this was a pleasant addition based on the progress made with the Duo, but Christopher sets us straight on that front, stating "Analogue Pocket is designed to support as much of portable videogame history as possible. We planned on supporting HuCards from day one." The HuCard adaptor for Pocket is expected to ship in 2021, for $29.99.

The Analogue Duo is due for release in 2021, priced at $199. The company is saying that quantities are limited, and after the quick sell-out of the Pocket, we're sure they will be.

To find out more and subscribe to email updates, you can visit www.analogue.co

PREVIOUS FORM

What did we think of Analogue's past consoles?

SUPER NT

"Like previous Analogue machines, the Super Nt is an attractive device. [...] The Super Nt handled everything we threw at it without a hitch – compared to a genuine NTSC SNES, nothing was out of place, off or amiss. [...] If you're a SNES neophyte and don't have any games of your own yet, *Super Turrican: The Director's Cut* and *Super Turrican 2* have been licensed as built-in games ready for you to play. [...] It's the best SNES clone we've ever tested."

MEGA SG

"Game compatibility is basically flawless. [...] As a nice bonus, the console includes the previously unreleased game *Ultracore*. [...] The Master System engineering is as impressive as the Mega Drive's engineering, with full support for the console's enhanced FM sound function and separately saved settings for the 8-bit machine. [...] You'll need your own way to bypass Mega-CD region locking. [...] It's not cheap, but if you're willing to splash the cash you'll get a truly premium experience."

» [PC Engine] Getting five players on *Bomberman* shoould be easier now that USB and wireless inputs can be used.

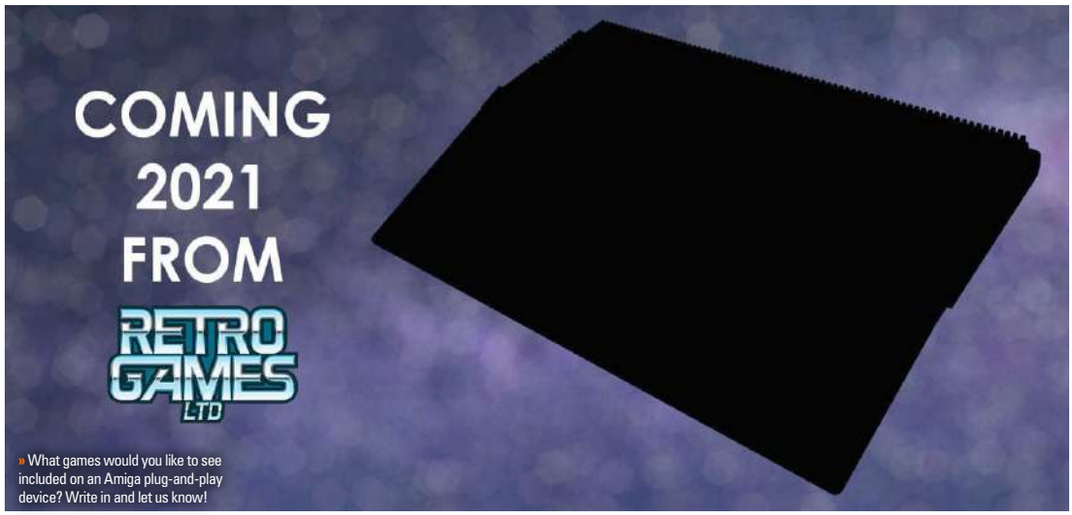
» As before, Analogue is working with 8BitDo to provide the technology for the wireless controllers.

PAC IN ACTION

A US federal court has dismissed Bandai Namco's lawsuit against AtGames over intellectual property rights. The Japanese developer had been seeking to conclude a final deal with General Computer Corporation regarding royalty rights for *Ms Pac-Man*, which had been developed by the American company, but these were instead purchased from GCC by AtGames in 2019. Bandai Namco had alleged that AtGames unlawfully interfered in such a way as to thwart its own attempt to purchase the rights, which would've allowed it to reissue *Ms Pac-Man* without paying royalties, but the lawsuit was dismissed without prejudice. AtGames now plans to reintroduce its Bandai Namco Arcade Blast! plug-and-play console.

SEGA SELLS UP

Sega is to exit the arcade operating business after several decades, selling off the majority shareholding in its Sega Entertainment subsidiary to GENDA, a Japanese company which currently operates an amusement machine rental business and online crane game sites. Sega cited losses and ongoing uncertainty due to COVID-19 as a key reason for the move, though it will retain a 14.9% stake in the business. Players shouldn't expect to see immediate change in the wild – the group, which operates close to 200 arcades in Japan, will continue to use the familiar Sega branding and Sega will continue to develop and manufacture new games for arcades.



» What games would you like to see included on an Amiga plug-and-play device? Write in and let us know!

MORE MINI MADNESS?

RETRO GAMES LTD TEASES NEW HARDWARE FOR 2021

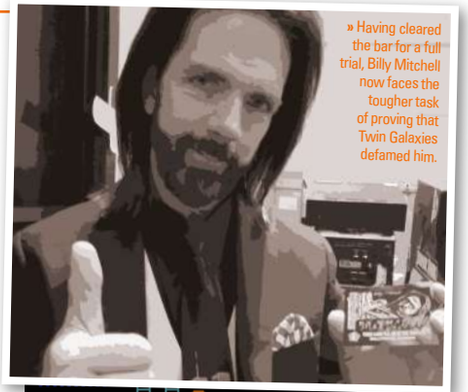
While we're not normally ones to report on teases lest they turn out to be highly disappointing, we're pretty sure that Retro Games Ltd is cooking up something special here. The company behind The C64 and The C64 Mini has teased a new piece of hardware on social media, with a silhouette that looks suspiciously like a home computer. Given the shape of the device and the company's previous work with Commodore IP owner Cloanto, we're pretty confident in saying that this will be an Amiga-related machine. We can't so confidently predict what kind of form it might take, but given the trend for mini devices and the higher cost of making a full-sized model with a functional keyboard, we'd guess at an Amiga Mini. We'd certainly be delighted to see such a device, as original Amiga hardware is now relatively expensive. We'll bring you more news on this exciting project as we receive it.

RECORD ROW RUMBLES ON

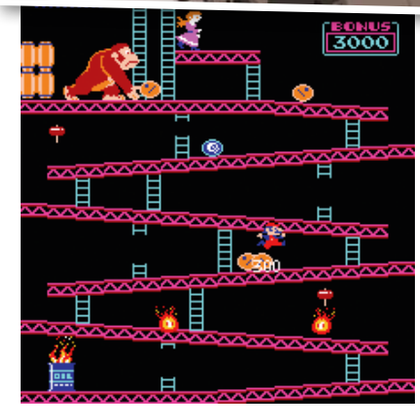
BILLY MITCHELL'S DEFAMATION LAWSUIT TO REACH TRIAL

The lengthy dispute over Billy Mitchell's former *Donkey Kong* world records shows no sign of ending soon, as his defamation case against Twin Galaxies is set to go to trial. For those unfamiliar with the saga, Twin Galaxies disqualified all of Billy Mitchell's scores across all games in 2018, following allegations that he had achieved some of his *Donkey Kong* world records on MAME rather than authentic arcade hardware – a breach of the rules of that competition category. Billy Mitchell disputes these claims, and earlier this year had his records reinstated by Guinness World Records following an appeal.

Presiding judge Gregory Alarcon denied Twin Galaxies a special motion to strike the case under California's 'Anti-SLAPP' law, finding that both parties have a reasonable probability of prevailing at trial. In order to win the case, Billy Mitchell will have to prove not only that the allegations by Twin Galaxies are false, but also that Twin Galaxies knew them to be false or deliberately avoided consulting sources that would prove them to be false. In the meantime, both parties continue to operate as usual. Billy Mitchell has recently been brought in to endorse an Antstream *Pac-Man* tournament and made a cameo appearance on All Elite Wrestling's flagship show *Dynamite*, while Twin Galaxies continues to accept new score submissions.



» Having cleared the bar for a full trial, Billy Mitchell now faces the tougher task of proving that Twin Galaxies defamed him.



» [Arcade] The method by which Billy Mitchell's *Donkey Kong* records were achieved are at the centre of the controversy.

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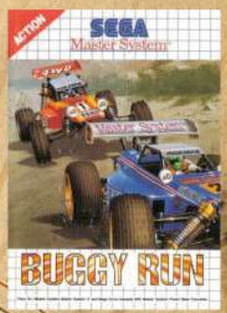

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Who is Iain Lee?
Iain Lee is a freelance broadcaster who loves gaming, particularly retro gaming. Join him as he hosts a phone-in show and plays games at www.twitch.tv/iainlee and also check out www.patreon.com/iainlee.

Can't stop twitching

'm sat here with my eight-year-old. We are watching SlogoMan play *Fortnite* on YouTube. Before that it was FGTeeV playing *Among Us*. We've been here for quite a while watching a load of different shouty people playing different games.

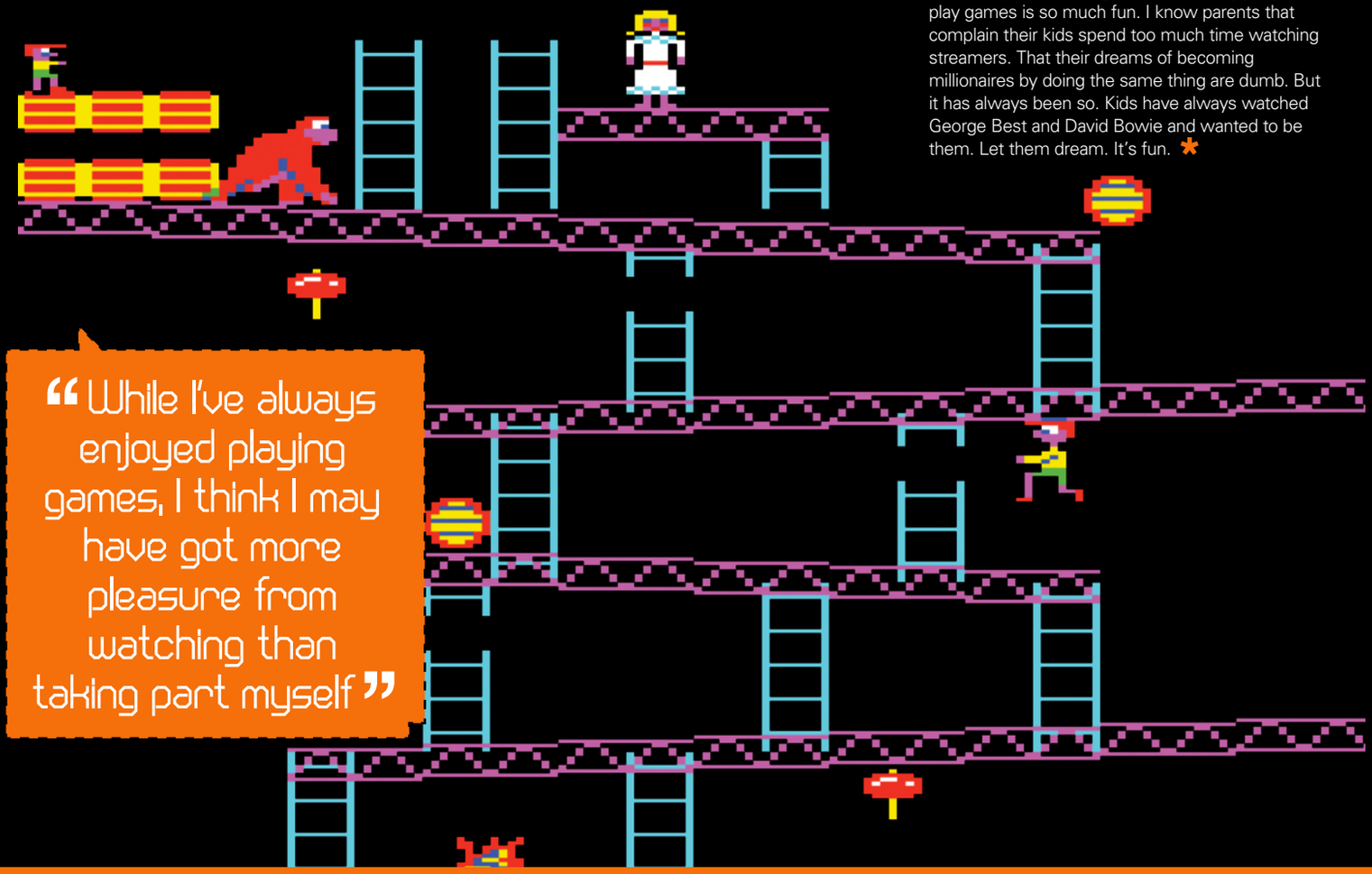
I've recently set myself up on Twitch, not to play games but to host a phone-in show, but every now and then I will play something and people come and watch. It feels good, knowing that 100 or so strangers around the world want to watch me play an old Speccy game or something new like *Spelunky*. I also get great pleasure myself by watching BlaqMario or Limmy as they struggle through a mixture of old and new games. For a while, I thought this was an odd new development in the story of gaming, but actually I think it's always been like this for a lot of us.

While I've always enjoyed playing games, I think I may have got more pleasure from watching than taking part myself. A voyeur instead of an exhibitionist, if you will. Sitting here with my youngest, I'm suddenly transported back to computer club at school when I wasn't much older than him. Once my 25 minutes was up, I'd always ask the next team if I could stay and watch. Sometimes they'd tell me to get lost, but more often than not, they'd let me stand behind them as long as I kept quiet (that was the tricky part).

Why did I like it so much? I think it boils down to two key ideas. Firstly, I liked seeing them make mistakes, simple things that I knew I could do easily. That satisfaction knowing I was probably more skilful than them. But the bigger thrill was if they were really, really good at a game. It was beautiful to watch. Like watching Jimi Hendrix get lost in the music and taking you on a magical journey, I got the same thrill watching Martin Telford breeze through *Killer Gorilla*. I think this is why E-Sports – absolutely no idea how to write that down, do I need capitals? That dash? Anyone? [It's 'esports', you fossil! - Production Editor] – are so popular. It's football for geeks like me who never got a buzz from football. It's the same skillz.

I can trace it back even further. Wandering around an arcade after my last ten pence had been spent, and finding a crowd watching an older kid playing *Defender* or *Galaxian*. The vibe was palpable, intoxicating, sexual almost. It was like wandering into an illicit jazz club and seeing… I don't really know enough about jazz to carry on this metaphor so I'll park it there, but hopefully you get the idea. It was fun, that's what I'm trying to say.

Some people don't get why watching people play games is so much fun. I know parents that complain their kids spend too much time watching streamers. That their dreams of becoming millionaires by doing the same thing are dumb. But it has always been so. Kids have always watched George Best and David Bowie and wanted to be them. Let them dream. It's fun. *



> "While I've always enjoyed playing games, I think I may have got more pleasure from watching than taking part myself"

Do you agree with Iain's thoughts? Contact us at:

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Who is Paul Rose?
Paul is probably better known as Mr Biffo – the creator of legendary teletext games magazine *Digitiser*. These days, he mostly writes his videogame ramblings over at Digitiser2000.com. If you want more Biffo in your eyes, you can catch him as the host of *Digitizer The Show* at www.bit.ly/biffo2000.

The secret's out

I've been reading for a while about The London Resort, a new theme park that has been proposed for the Swanscombe Peninsula in Kent. If it goes ahead, it'll be – the people behind it claim – a theme park worthy of rivalling the Disney and Universal parks elsewhere in the world.

However, what really jumped out at me in the latest set of plans is how the site will play host to a vast esports arena. Gaming, its executives claim, is crucial to bringing in a younger audience, and esports is a key part of its future expansion.

This, coupled to the development of a Nintendo-themed area at various Universal Studios parks, feels like it's a firm sign that gaming is an established part of our culture now – big enough in itself to be a draw alongside major movie and TV properties.

That's exciting, of course, but there's a part of me that feels a bit… put out. It's petulant and childish, but some of the appeal of being into gaming when I was growing up is that it was 'our' thing. Vast swathes of the population didn't understand videogames, didn't play them, simply didn't get them. Games were made by gamers for gamers, but as soon as those games began making money, the accountants and business people got involved, and gaming turned into something corporate. Less about art and more about the bottom line.

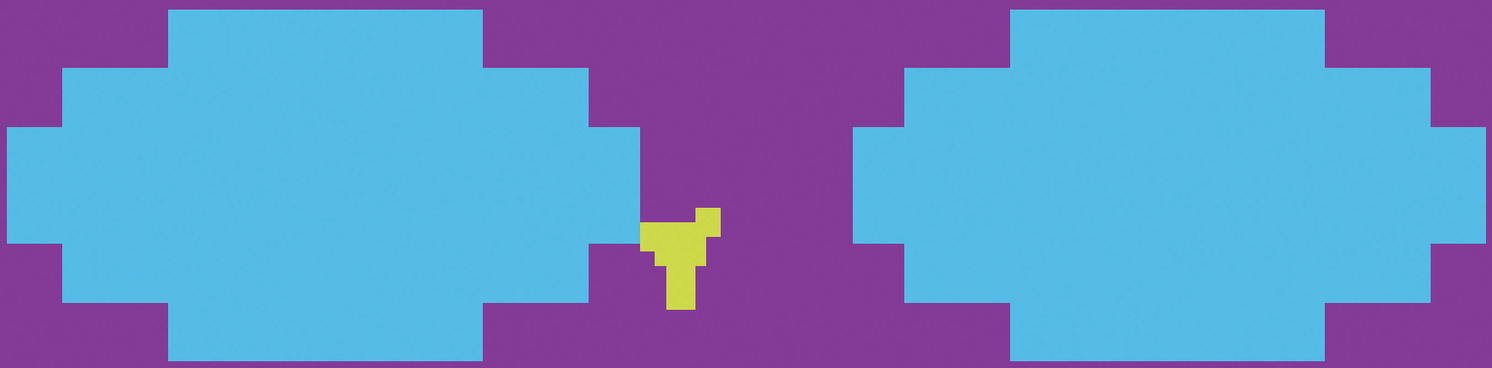
Now, our generation is getting older and having kids, and gaming has become so multifaceted that it's something that everybody does. Even if we're just talking your nan playing *Candy Crush* on Facebook. In short; gaming has gone mainstream.

I guess it feels like being into some obscure band, and suddenly they have a hit and become massive. Gaming no longer feels like it belongs to me; it belongs to everyone. As a kid, it was almost a dirty secret. Even at school there were kids who played games, and kids who didn't. Those of us with a home computer or console could speak a language that the rest of our peers could never hope to understand. We had a shared connection, and as gaming has grown ever larger, that secret language has become as lost as Sumerian or Sanskrit.

It's a petty thing to feel a sense of loss over, I know, but – and here's the real confession – I don't understand esports. I come from a generation where games were played in our bedrooms. At most, we could enjoy a two-player game of, I dunno, *Combat*, but generally it was something that was very individual. I remember going round to the home of Peter Lemon (yes, that was his real name), and watching him play *Jet Set Willy*. Literally just watching, because he didn't let me have a go, but that was okay. There was still that sense that we were doing something private. A bit naughty. In his bedroom.

Now gamers are sharing their hobby in front of hundreds of thousands of people in vast, custom-built, arenas. You can't tell me that we've not lost something. *

> "Now, our generation is getting older and having kids, and gaming has become so multifaceted that it's something that everybody does"



Do you agree with Paul's thoughts? Contact us at:

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Millie & Mollie & Mobile

Carleton Handley on moving his popular C64 game to other formats

We were incredibly impressed by *Millie And Mollie* when we first encountered the clever Commodore 64 puzzle game. Coded by Carleton Handley, with level design by Chun Wah Kong, it proved to be so popular that Carleton has now ported the game to iOS and Android. Here he explains how it all happened.

Why convert your C64 game to iOS and Android?

I had been working on a major app for a few years, but I left when the team size was reduced. I thought I would take the opportunity to get back to games programming by trying out Unity. As *Millie And Molly* was such a success, converting it seemed a useful basis for my learning.

How long has it taken to create?

It took me around seven weeks in total. Unity itself is very powerful, and the coding side was relatively straightforward because I'd already done a lot of the hard work in writing the C64 version.

» [iOS] Carleton tells us one technical hurdle was adapting the 4:3 C64 original to screens with wider resolutions. We feel he's tackled it admirably.

» [iOS] "I spent quite a while refining the touchscreen controls," Carleton explains. "I wanted to avoid an on-screen joypad so I am very pleased with the way it handles on mobile."

» Carleton's daughter helped him a lot while he worked on the mobile versions.

What improvements are offered over the C64 original?

The biggest change is the 16-bit mode. I started developing these versions using the C64 graphics, but artist Saul Cross sent me some examples of some graphics he had done for a potential Amiga version and we decided to use both. The player can choose which style they prefer in the options.

Is achieving the perfect puzzle balance tricky?

It is very tricky. Chun spent a lot of time designing and ordering the levels for the C64 version. I played through and marked a couple of levels I thought were hard and then saw other people not struggle with them at all. And you do not want players giving up halfway through if they are stuck. So, the later difficulty comes from new ideas rather than just ramping up what is already there.

You worked on the original with Chun Wah Kong, what involvement has he had here?

Chun's levels return from the original version and he playtested builds of the mobile versions. Chun started out in QA and he picked up on some of the more obscure bugs. He also put me straight after I changed a couple of his levels.

Why have you allowed players the option to play levels out of order in later chapters?

There was some feedback on the Commodore version as to certain levels being sticking points. I did not want players to give up if they were finding a level especially hard. So, they can skip that level for a while and perhaps come back to it with fresh eyes a bit later.

» [iOS] The 8-bit graphics in all their glory. "There is something charming about seeing C64 graphics on an iPhone X," Carleton tells us.

Is it hard to get your game noticed on mobile devices?

It is nearly impossible. The C64 version is a big fish in a small pond. The mobile version is as far from that as it is possible to be. We have had some traction, but it does not look like I will be making a profit any time soon.

Why choose a paid price over a free-to-play option?

For me adverts and in-app purchases ruin a lot of games. I think you should be able to buy something and play it.

Why do you think *Millie And Mollie* has struck a chord with gamers?

Saul's graphics are cute, and the two sisters seem to have caught the attention of nontraditional gamers, especially families with younger children. Chun's level designs are amazing and rewarding to solve. Hans [Axelsson-Svala]'s music is brilliant and fits the mood perfectly. All this comes together to make a great game no matter what the format.

Can we expect a C64 sequel and is it heading to any other platforms?

I would love to do a sequel, but I am currently concentrating on getting paid work. The game is also available on Mac and Windows. I hope to do a Switch version, but that would require a publisher. ✱

» [iOS] Carleton reveals, "The Commodore version required passwords to unlock which level you were at, but progress is saved automatically now."

BACK TO THE NOUGHTIES

JANUARY 2004 – New year, new deal? No chance. We've got Castlevania and Final Fantasy sequels, Rockstar courting controversy and a disconcertingly dry month for GameCube owners. Nick Thorpe hops in the time machine for another month of vintage news…

[PS2] *Manhunt* wasn't a *GTA*-style smash hit, but just you wait – you'll hear more about it in 2004.

NEWS JANUARY 2004

The talk show *Kilroy* was suspended on 9 January after its host Robert Kilroy-Silk wrote a column titled *We owe Arabs Nothing*, published in the 4 January edition of the *Sunday Express*. The former Labour MP resigned from the BBC on 16 January, ending the show's 17-year run.

David Kay, the American weapons inspector leading the Iraq Survey Group's search for weapons of mass destruction, resigned on 23 January. His belief was that Iraq had not possessed stockpiles of WMDs following the first Gulf War and that such weapons would never be found. Testifying before the Senate Armed Services Committee days later, he noted that before the invasion, 'The best evidence that I had seen was that Iraq indeed had weapons of mass destruction," and that the likes of Germany and France had also believed this to be true, but that "we were all wrong, probably in my judgment, and that is most disturbing".

On 27 January, the government won a vote over the Higher Education Bill, which was intended to raise university tuition fees to £3,000 per year, as well as introduce a system of income-linked repayment of fees and loans. Labour rebels felt that this contradicted their pledge not to introduce 'top-up fees' and staged a rebellion, but the government averted defeat with the first vote passing by 316 to 311. Controversially, the government relied on support from Scottish Labour MPs, whose constituents would not be affected by the bill.

THE LATEST NEWS FROM JANUARY 2004

After spending most of 2003 being accused of producing "murder simulators" by the infamous anti-gaming lawyer Jack Thompson, Rockstar decided to go ahead and release *Manhunt* – an *actual* murder simulator. The stealth game cast players as an unwilling participant in a snuff film, and featured arguably the nastiest, most brutal executions seen in any videogame. Critics were sharply divided, with *GamesMaster* scoring it 92%, saying that it was "simple but effective" and that it "may not be the best *videogame* ever, but it is one of the best videogame *experiences* ever". *Edge* scored the game 8/10, feeling it to be "amoral rather than immoral" and praising it for drawing on "refreshingly different and diverse" influences such as *The Warriors*, *The Running Man* and *Escape From New York*. Wholly unimpressed by *Manhunt*, *games™* scored it 3/10 for being "shallower than a puddle", citing the simplicity of gameplay, stupidity of enemies and lack of variation in mission structure as examples of how the game favoured "style over content". *Play* scored the title 30%, saying that "the violence lacks *Tenchu*'s style, and the humour isn't humorous".

[Xbox] *Counter-Strike* wasn't the most visually impressive Xbox game, but did play very well.

[GBA] Look, it's Mario in his pants! Only **Retro Gamer** gives you the good stuff.

Edge felt that *Final Fantasy X-2* "will certainly divide the audience", but for rather different reasons. The first ever direct sequel in the *Final Fantasy* series focused on the women of *Final Fantasy X*, and represented a departure from its predecessor with a new Dressphere class system and a mission-based structure that *Play* described as "all a bit wrong" and "just not *Final Fantasy*". The new approach was positively received by *games™*, which claimed that it made "a welcome change from the usual fare". *GamesMaster* warned that the game "assumes you're an old hand from the start", and recommended it only to fans of the original. *Play* scored the game 84%, *GamesMaster* 83%, and both *games™* and *Edge* awarded it 7/10.

Speaking of polarising decisions, Konami brought *Castlevania* to PS2, complete with 3D graphics – a decision that won't have sat easily with fans who remembered the awkwardness of the N64 games. *Edge* rated the game 8/10, arguing that while the game offered "no unique ideas", it was "impeccably produced" and "breathes new life back into one of videogaming's oldest franchises".

[PS2] Nontraditional in every way, *Final Fantasy X-2* still received critical praise from the press.

[PS2] It was certainly a good-looking effort, but not everyone was convinced by *Castlevania*'s game design.

[GameCube] Weirdly, this looks a lot like *Attack On Titan* when viewed with 2020 eyes.

Less positively, *games™* felt that while the game was not "anywhere near as disappointing as many people were expecting", it was "just too damn small" and failed to "offer any real sense of exploration". That was good for a score of 6/10. Elsewhere on the PS2, you could experience licensed martial arts disappointment in *Crouching Tiger, Hidden Dragon* (53% *Play*, 30% *GamesMaster*), licensed sci-fi despondency in *Battlestar Galactica* (65% *Play*, 58% *GamesMaster*), and the inappropriately edgy *Outlaw Golf* (78% *Play*, 48% *GamesMaster*)

Xbox players will have been disappointed to discover that *Counter-Strike* wasn't going to be the killer app for Xbox Live. *Edge* felt that the conversion was "handled with such delicacy and intelligence", but *GamesMaster* noted that it was "knocking on a bit technology-wise", and *games™* scorned the practice of "charging £40 for what is effectively a free, ageing PC download". The game received scores of 7/10 from *Edge*, 70% from *GamesMaster* and 6/10 from *games™*. Also available was the RPG *Arx Fatalis*, which *Edge* described as a "perfectly awful conversion" of the PC original in a 4/10 review. *GamesMaster* felt it to be "a little sterile" but "perfectly playable" and gave it 55%.

GameCube owners hoping that their console's fortunes might turn a corner in 2004 were met with a dearth of noteworthy software to open the year. Rebellion must have been thrilled to see *NGC*'s review of its belated multiplatform arrival *Judge Dredd: Dredd Vs Death*, as the "fast-paced, thrilling and bloody shooter" scored 84% – a much more favourable appraisal than it received anywhere else. Beyond that, the system received the solid puzzle update *Super Bust-A-Move All Stars* (*NGC*, 70%), plus tie-ins of varying quality. The "surprisingly absorbing" *Jimmy Neutron: Jet Fusion* earned 71% from *NGC*, earning praise for being "fun and simple" if "perhaps too linear and basic", while *Spongebob Squarepants: Battle For Bikini Bottom* earned 32% for "badly designed levels and some awful collision detection".

Game Boy Advance owners at least had reason to cheer this month, with two major first-party games delivering the Nintendo quality you'd hope for. *NGC* felt that the "cheeky, charming, innovative" RPG *Mario & Luigi: Superstar Saga* was worth 94%. *Edge* was also impressed, awarding the game 8/10 and praising the plot's "delicate little deconstruction of gaming conventions", and *games™* scored it 9/10, impressed by the simplification of the complex task of controlling two sprites. *Fire Emblem*, finally making its first journey out of Japan after 14 years, was considered to be "superior to *Final Fantasy Tactics*" by *NGC* – a strong statement backed up with a 92% score. *GamesMaster*'s 91% review came to the same conclusion, with the reviewer noting that "what it lacks in immediacy", as compared to the *Advance Wars* games, "it makes up for in a feeling of involvement" through the experience system and more prominent plot.

That's all for this month, but do join us next time to see what delights frosty February has to offer. ✱

CHARTS

JANUARY 2004

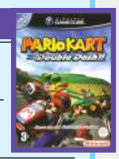
PLAYSTATION 2

1 – Need For Speed: Underground (EA)
2 – The Simpsons: Hit & Run (Vivendi)
3 – Medal Of Honor: Rising Sun (EA)
4 – Lord Of The Rings: Return Of The King (EA)
5 – FIFA 2004 (EA)

XBOX

1 – Grand Theft Auto: Double Pack (Take 2)
2 – Project Gotham Racing 2 (Microsoft)
3 – Need For Speed: Underground (EA)
4 – Tom Clancy's Rainbow Six 3 (Ubisoft)
5 – XIII (Ubisoft)

GAMECUBE



1 – Mario Kart: Double Dash!! (Nintendo)
2 – Star Wars: Rebel Strike (LucasArts)
3 – The Simpsons: Hit & Run (Vivendi)
4 – Lord Of The Rings: Return Of The King (EA)
5 – Need For Speed: Underground (EA)

MUSIC

1 – All This Time (Michelle)
2 – Mad World (Michael Andrews Ft Gary Jules)
3 – Milkshake (Kelis)
4 – Changes (Ozzy & Kelly Osbourne)
5 – Somebody To Love (Boogie Pimps)

THIS MONTH IN...

games™

The WonderSwan is no more, as Bandai CEO Takeo Takasu tells the *Mainichi Shimbun* that the company will be concentrating on software leveraging its character licences. Interestingly, *games™* also reports a Bandai minority shareholder is contemplating a takeover, despite both parties denying any such talks. That shareholder? Nintendo.

Edge

Bad news for Nokia, as the N-Gage's bad start is compounded by piracy problems. "According to hackers, the games can also be played on other devices running the Symbian operating system," *Edge* reported, with the Siemens SX1 apparently having been shown running *Sonic N* on the Club Siemens website before Nokia requested its removal.

Retro Gamer

Oh, so now we're retro? Live Publishing launched a new magazine dedicated to classic gaming this month, with Martyn Carroll at the helm as editor and a big top 100 games feature to kick things off. The magazine was originally intended as a quarterly publication, cost £5.99 and came with a cover disc loaded with emulators and other tools.

INVISIBLE
CHONDRILLA
HEMLOCK

Feud

BROTHERS IN ARMS

» RETROREVIVAL

» AMSTRAD CPC » 1987 » BINARY DESIGN

One of the best things about working on Retro Gamer is that you get to quiz the people who made the games you loved growing up as a kid. I still have fond memories of chatting to Ste Pickford at a retro event in the mid-Noughties and discussing how much I loved *Feud* over a pint of beer. He's probably long since forgotten that conversation, but the thing I always took away from it was how humble he was about his work on that game. The Pickford brothers have always been refreshingly down-to-earth and honest whenever we've interviewed them, and in a way, that conversation I had with Ste while nursing my pint made me appreciate *Feud* even more.

And what a game it is. As the Pickford brothers rightly pointed out back in issue 132, it's essentially an early example of a deathmatch against an AI opponent, and it works incredibly well. You take on the role of Learic, an adept wizard from Little Dullford who does not get on at all with his equally skilled brother, Leanoric. You decide that Little Dullford only has enough room for a single wizard, so you attempt to blast your upstart brother into oblivion. Spells are tricky to make, however, and you'll need to traverse the countryside, looking for herbs and ingredients that you can then combine to create potent magic that will either offer you useful enhancements or seriously hamper, and eventually kill, your annoying brother.

Leanoric has come to the same conclusion as you, though, and he too is rushing around, looking for the right combinations of herbs that will allow him to send you to an early grave (amusingly shown on-screen). The end result is that *Feud* becomes a frantic game of cat and mouse as you recklessly rush around Little Dullford hoping that you'll be able to find the relevant herbs to cast the fireballs and lightning bolts at Leanoric before you befall a similar fate. There's a palpable frenzy to *Feud* that still excites me today, and there's nothing quite like how your heart stops whenever Leanoric makes an appearance, because you have no idea if he's equipped with that winning spell or not until he fires it off.

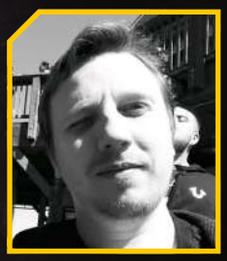
I'd love the Pickfords to make a new version of *Feud*, but I can't see it happening any time soon. I'd love to be proven wrong, though. ✱

THE HISTORY OF TURRICAN

A TALENTED GROUP OF GERMAN CODERS PUSHED THE TECHNICAL BOUNDARIES OF HOME COMPUTERS WITH THE TURRICAN SERIES OF RUN-AND-GUN GAMES. BUT THE GRAPHICAL SPLENDOUR WAS SET AGAINST A BACKGROUND OF BITTER DISPUTES

WORDS BY LEWIS PACKWOOD

JULIAN EGGEBRECHT, STUDIO HEAD, FACTOR 5



AUDI SORLIE, CO-CREATOR, TURRICAN DOCUMENTARY

CHRIS HUELSBECK, COMPOSER

DENNIS MENDEL, COFOUNDER, STRICTLY LIMITED GAMES

It all starts, as so many of these stories do, with a group of kids messing around with computers. "I was finishing the equivalent of high school in Germany, in '89," says Julian Eggebrecht, now head of *Turrican* studio Factor 5, "and a bunch of friends of mine in my local town, we wanted to make Amiga games." Julian's hacker group had been working on Amiga follow-ups to *Paradroid* and *MULE*, but it was their remake of *Ballblazer*, called *Masterblazer*, that showed the most promise. And Julian, as the "only one who somewhat decently spoke English at the time", was given the job of finding a publisher.

Lucasfilm Games, which had developed the original *Ballblazer*, told him the rights were in the hands of its German distributor, Rainbow Arts. "So next day, I'm on the phone," says Julian, "and I got through to a new producer Rainbow Arts had just hired, which was Boris Schneider." Boris was a famous German gaming journalist and the official German translator for Lucasfilm Games, and the pair hit it off straight away. Boris immediately invited Julian down to the Rainbow Arts offices in Dusseldorf, where he met Manfred Trenz, designer of *The Great Giana Sisters*, and chiptune maestro Chris Huelsbeck.

"Manfred at the time was working on this tech demo on the C64," says Julian, "which was based on scrolling in all directions at the same time in really, really large levels." Coincidentally, the recently formed Factor 5, then made up of students developing games in their spare time, was working on the same technical challenge on the Amiga. Julian had met the founders of Factor 5 at a hacker party not long after the 1988 release of *Katakis*, a technically impressive *R-Type*-style shooter that the group had ported to the Amiga. But in the summer of 1989, all he wanted was to get *Masterblazer* published.

Julian worked out a deal for *Masterblazer*, even flying out with Boris to visit Lucasfilm Games at Skywalker Ranch in California, and by autumn it was pretty much done and dusted.

» [C64] The *Metroid* influence is clear in the way our hero can crunch up into a ball and roll around. Unlike in *Metroid*, however, you become invincible while curled up.

» [Amiga] The Amiga version of *Turrican* is widely agreed to be the best of the conversions, even though the C64 was the lead platform. The soundtrack is utterly fantastic.

Then a short while later, he received an unexpected phone call. "I was still living with my parents," recalls Julian, "and Boris said, 'Well, we just lost one of our producers, and you've been here, like, ten times in the interim, we hit it off really well at Skywalker, so why don't you join the company?' So I packed my bags, told my parents I'm going to put my university career on ice, and drove down to Dusseldorf." Julian vividly recalls this momentous journey: "The Berlin Wall had just opened, so when you were driving down the autobahn, there were West Germans with banners up welcoming East Germans, who for the first time were able to leave the Iron Curtain. It was pretty cool back then."

> "IT WAS BASICALLY A MIXTURE BETWEEN METROID, WITH LARGE, SPRAWLING LEVELS, AND ELEMENTS FROM A DATA EAST ARCADE GAME, PSYCHO-NICS OSCAR"
> JULIAN EGGEBRECHT

At the point Julian arrived, Manfred had developed his C64 tech demo into a prototype for what would become *Turrican*, and he was ready to start production. "It was basically a mixture between *Metroid*, with large, sprawling levels, and elements from a Data East arcade game, *Psycho-Nics Oscar*," says Julian. Players would take control of a bio-engineered warrior fighting a murderous ▶

» [C64] This snake beast might look fearsome, but all you need to do is duck and it can't hit you at all. Ha! In your face, snake beast.

AUDIO OVERDRIVE

CHRIS HUELSBECK EXPLAINS HOW HE OVERCLOCKED OLD MACHINES

***How were you able to get sampled speech into* Turrican?**
To get voice samples in there was extremely challenging. We did fragments and then pieced them together again with my sound-programming language. I had a system where every note or sound effect was actually triggering a small script – I called them 'sound macros'. And they enabled me to do things like splicing together voices. So, for example, for 'Power Up' and '1-Up', the 'Up' would be a separate sample, and then we would reuse that. It was a way of combining samples to keep the memory footprint low.

Did you do the voices yourself?
I know I did that intro voice of *Turrican* I. I didn't know that until a few months ago when Julian reminded me that I recorded that myself!

***How did you create seven sound channels on the Amiga for* Turrican II?**
Jochen Hippel was doing really great stuff on the Atari ST, including writing a sound driver that would emulate the Amiga sound chip. The main part was a sample mixer that would use the CPU to create the four Amiga voices. Then I thought, 'Hey, what if I use something like that so the CPU makes four voices in one channel on the Amiga, and then keep the other three Amiga channels pristine?' So then you could decide which sounds to play on the CPU-mix channels, because they would lose some fidelity, and which sounds you could use the other three Amiga voices that would be untouched. So I talked to Jochen, and he graciously gave me his source code, and I ported it back to the Amiga.

What was it like working on the Mega Drive?
The Mega Drive actually had three ways of generating sound. There was an FM chip in there with six voices. Then there was the old-style PSG, which was even simpler than the C64 sound chip, but that had four channels: three kind of melody channels that would play a simple synth wave, and one channel was noise. And then the guys from Factor 5 also took the concept of sample mixing and provided two channels of simple eight-bit samples, so I could use those for drum sounds and voices and stuff like that

That was pretty innovative, because the programmer, Thomas Engel, he actually used the Z80 processor, which is usually reserved in a Mega Drive for compatibility with the Master System. And the hardware requirements from Sega actually said not to use that Z80 in conjunction with the 68000 chip. I don't know what the reason was exactly: either they thought that the hardware couldn't handle it, or that it would overheat. My theory is that maybe they had planned a future Mega Drive without the Z80 part, without the Master System compatibility, and they didn't want to risk that some Mega Drive games wouldn't play on that. But that never happened.

"I SAID, 'CAN WE GET ONE PIECE OF MUSIC PER LEVEL?' AND CHRIS SAID, 'YOU'RE CRAZY, THAT'S LIKE 20 PIECES OF MUSIC!' AND I SAID, 'YES, BUT WE WANT TO MAKE THE GREATEST ACTION GAME EVER, SO LET'S DO THAT'"
JULIAN EGGEBRECHT

» [NES] Manfred Trenz created *Super Turrican* for the NES, but the lack of an MMC chip in the cartridge meant it could only be a cut-down version of the original *Turrican*.

▶ AI called MORGUL – although later games would swap the antagonist for an evil emperor known as The Machine.

Because Julian got along well with Manfred and Chris, he was put in charge of producing the new project, which the marketing department initially wanted to call *Hurricane*. But both Julian and Manfred felt the name was too boring and fought to get it changed; Julian says it was Manfred's idea to change the 'H' for a 'T'.

However, they faced a problem. "At the time, the C64 was starting to go down in popularity in Europe," says Julian. "So the Amiga was our main platform, and they had the crazy idea that Manfred would do the Amiga version." Manfred had never programmed on the Amiga, which had completely different architecture from the C64. "We all knew that Manfred would understand it, because he was a technological genius," Julian says, "but it would take way too long, and [the Amiga and C64 versions] needed to come out at the same time." Recalling that Factor 5 had been working on the problem of multidirectional scrolling on the Amiga, Julian got in touch with Holger Schmidt from the group, and asked him whether he could move down from Cologne to work on the Amiga port of *Turrican*. Factor 5's Achim Moller also stepped in to help with programming.

But *Turrican* was written in assembly code for the C64 MOS 6502 chip: code that was completely unintelligible to the Motorola 68000 chip of the Amiga. "So Holger sat down, he looked at the game and he played the game, and then rewrote it from scratch," says Julian. "But of course, he had Manfred right there, so if he had a question, he got a direct explanation." At the same time, Holger tried to maximise the potential of the more-powerful Amiga, for example by implementing much smoother scrolling. By January 1990, after two months of development, Holger's Amiga version had caught up to the same stage as Manfred's Commodore 64 one, which led to the pair

CONVERSION CAPERS:

COMMODORE 64
■ The original version developed by Manfred Trenz, awarded 97% by *Zzap!64*. It pushes the C64 to its limits, with around 1,300 screens and multidirectional scrolling, but a lack of spare memory means it doesn't have any music during levels.

AMIGA
■ The Amiga port was developed in tandem with the C64 version, although coder Holger Schmidt took advantage of the Amiga's extra oomph to deliver smoother scrolling and better graphics. It also features Chris Huelsbeck's excellent soundtrack throughout.

ATARI ST
■ If the Amiga version of *Turrican* can be considered the definitive one, then the Atari ST port runs a close second. Thomas Engel did a superb job of imitating the Amiga game, although it's let down by the Atari's weaker sound capabilities, resulting in somewhat bleepier tunes.

» [SNES] Not to be confused with the NES game, *Super Turrican* on SNES was a colourful joy, and mixed elements from the first two *Turrican* games.

developing a friendly rivalry. "And that was really nice," says Julian, "because then Holger was doing things on the Amiga which sparked Manfred, and he was like, 'Ah, I can do that on the C64, I'll show you this!'"

That left the final piece of the puzzle: Chris Huelsbeck's memorable soundtrack. Julian recalls that Chris was a habitual night worker. "He got up at 6pm and then worked 'til five in the morning. And we always worked 'til midnight anyways on the game development side, so at around six, when Chris got up, I was always hanging around with him in his studio while he was tinkering around with different soundtracks." Chris had created the score for *Masterblazer*, and Julian was a huge fan, so he approached him about the *Turrican* soundtrack. "I said, 'Can we get one piece of music per level?' And he said, 'You're crazy, that's like 20 pieces of music!' And I said, 'Yes, but we want to make the greatest action game ever, so let's do that.'"

Chris had started freelancing for Rainbow Arts when he was still at school in the Eighties, eventually joining as an in-house composer. He says that when it came to creating the music for *Turrican*, he was heavily influenced by Japanese games. "At that time, I was very aware of Japanese composers and the quality of music. I really liked the playfulness and the memorable melodies. That was the kind of thing that spoke to me, because that was my own aspiration: to find really memorable melodies." Chris envisaged the soundtrack as rock music mixed with synthesizer sounds. "I wanted it to be relatively fast-paced, so we opted to go for a rock beat," he says, "which was faster than the usual dance-speed stuff, so more like 150 to 180 beats per minute. And that gave it that driving feel during the gameplay."

» [SNES] This section in *Super Turrican 2* is highly reminiscent of *Contra III*, as you scale a building while holding off enemy forces.

The superb *Turrican* soundtrack even made it onto CD, a rarity in the Nineties. Chris released the *Shades* album in 1991, featuring music from *Turrican* and several other games he had worked on, and it was a commercial success – even though he was snubbed by record stores. "There was no interest whatsoever from the regular music industry," he says. "But we ▶

THE ORIGINAL TURRICAN THE MANY GUISES OF THE METAL WARRIOR

ZX SPECTRUM

■ Probe Software was given the job of porting *Turrican* to the Spectrum, with Von Dazzlin (aka Daren White) on coding duties. Mr Dazzlin did a good job of keeping the main gameplay elements and level layouts intact, but it pales in comparison to the C64 original.

AMSTRAD CPC

■ Another effort by Von Dazzlin, and again one which falls short of the C64 version. Nevertheless, it still remains one of the Amstrad CPC's more impressive games: *Amstrad Action* magazine gave it a 'Master Game' award, showering it with a 90% score.

CDTV

■ The 1991 CDTV release of *Turrican* was exactly the same as the Amiga version. It didn't even add CD audio – a lost opportunity to beef up Chris Huelsbeck's tunes. Nonetheless it's a great conversion, and the failure of the CDTV makes this port exceedingly rare.

GAME BOY

■ Accolade was in charge of the console releases of *Turrican*, and it handed over porting duties to The Code Monkeys. The Game Boy version just about works, and it's an achievement that most of *Turrican's* huge levels are in there, but it's hard to play on a tiny screen.

MEGA DRIVE

■ The Mega Drive game is similar to the Amiga version, although the soundtrack has become somewhat mangled in translation. The Code Monkeys added a much-needed jump button, but left it so 'up' also triggers jumps, leading to many an accidental leap.

TURBOGRAFX-16

■ Only released on North American shores, the TurboGrafx-16 version of *Turrican* was something of a disappointment. The third world is missing in action and Chris Huelsbeck's soundtrack has been gutted to leave only one track per world rather than per level.

didn't even really need it, because we had a connection to a game magazine that wanted to sell this for us. So right off the bat we had an order of 3,000 copies through the magazine." Chris also took a booth at the Amiga fair in Cologne to sell CDs. "We actually sold out by the second day, we didn't bring enough copies. So then we had to take preorders and manufacture more." All told, *Shades* sold around 12,000 copies, and it was followed by a full release of the *Turrican* soundtrack in 1993.

But the Commodore 64 version of *Turrican* was notably lacking in music. The reasons for this are threefold, says Chris. "When Manfred worked on the C64 version, he didn't have much CPU time left, because he was really pushing the Commodore 64 to the absolute limit. Also, I had already moved on to the Amiga, so I wasn't actually as keen to work on the C64. And the third problem was that Manfred had very specific ideas about how he wanted the music to be."

Julian elaborates: "Manfred had very strong ideas and a completely different musical taste from Chris. So Manfred came to Chris and basically said, 'I want you to convert this piece of music, don't compose your own.' And Chris was basically, 'Oh come on man, I can do something better.' And so they really didn't see eye to eye."

Towards the end of development, says Julian, the team decided the Atari ST had a big enough base in Europe that it warranted its own version of *Turrican*. "Holger and Achim said, 'Well, we know this crazy guy, Thomas Engel. He's been doing Amiga and Atari ST, and he's actually building our software tools. And I was like, 'Has he ever shipped anything on the ST?' They said, 'No, but it can't be that hard if it's just a crippled Amiga.' That was the attitude in Germany back then!"

By this stage, there was already talk of a sequel. "We already knew that we wanted to do *Turrican II* over the next eight months," says Julian. "And so I told Thomas, 'Okay, so here's the catch. We need to get out *Turrican* as quickly as possible on the Atari ST, so you first need to catch up and do that, and then you have to do *Turrican II* so that it comes out concurrently on the ST.' And Thomas said, 'Fine, let's do that.'" Thomas ended up doing a remarkable job on the Atari ST port, which came out a few months after the Amiga and C64 versions, although *Turrican*'s technically demanding multidirectional scrolling meant that he couldn't match the Amiga's smooth 50 frames per second. "But he did it in 30fps and he didn't cut out anything else, and that was pretty damn impressive on the ST," notes Julian. Jochen Hippel from Thalion also did a fantastic job of converting Chris' soundtrack by writing a program that emulated the Amiga's sound chip (see 'Audio Overdrive' on page 20).

Development of the 1990 Spectrum and Amstrad CPC versions of *Turrican* was handled by Probe Software. But Julian is quick to point out that he and his team had nothing to do with those "horrible *Turrican* conversions done by Accolade", which were released the following year. Rainbow Arts had handed over the console releases to Accolade, which contracted British developer The Code Monkeys to produce versions of *Turrican* for the Game Boy, Mega Drive and TurboGrafx-16. "We had no influence on that," says Julian. "We were all up in arms that they didn't tell us about even giving away the licence, and we absolutely hated that version. I mean, it was just god awful."

When it came to making a sequel, Julian had big plans for *Turrican II*. "I think one of the weaknesses in *Turrican* was it doesn't really push the Amiga," he says. "And partially, that was the graphics style." For *Turrican*, Manfred would design each graphical element using the C64's limited colour palette and pixel count, then these would be transferred to the Amiga with some added detail. But for the sequel, graphics artist Andreas Escher designed each element of the Amiga version from scratch. "That's why *Turrican II* looks so good on the 16-bit

"WE WERE ALL UP IN ARMS THAT THEY DIDN'T TELL US ABOUT EVEN GIVING AWAY THE LICENCE, AND WE ABSOLUTELY HATED THAT VERSION. I MEAN, IT WAS JUST GOD AWFUL"
JULIAN EGGEBRECHT

» [Amstrad CPC] The third world of *Turrican* sees our tin-can hero donning a jetpack for a vertically scrolling shoot-'em-up level.

» [Mega Drive] Even though *Turrican III* came out first, *Mega Turrican* was the original version of the game. It was actually held up by protracted publishing negotiations.

» [Amstrad CPC] The Amstrad CPC conversion of *Turrican II* was another fine effort considering the machine's limitations, although it's far from the best way to experience the game.

» [C64] This fistful of fun made another appearance in *Super Turrican* on the SNES, which styled itself as a 'best of' compilation of *Turrican* goodness.

machines," says Julian, "because we finally had a dedicated graphics artist."

This time around, the Amiga was the lead development platform rather than the C64. "That's why it diverges here and there in the later stages quite a bit from the C64 version," says Julian, "because Manfred couldn't do some of the things that were possible on the Amiga." The level design was also a team effort, with input from Manfred, Andreas, Holger and Julian, and Chris Huelsbeck returned to make what Julian declares is the "best soundtrack on the Amiga".

But even though the first two *Turrican* games received critical adoration for their technical achievements and fast-paced gameplay, Julian says that sales were poor – something he puts down to lacklustre advertising and weak UK distribution on the part of Rainbow Arts, along with rampant piracy. "Pirated copies got around everywhere," he says. "The frustrating thing is that especially on the Amiga version, Holger had spent an enormous amount of time on finding new compression schemes to expand the disk beyond what it was designed to do. So the retail version was all on one disk, but the pirates had to turn the game into two disks because only a professional replication house was able to replicate the disk format that we came up with. We hated the fact that everybody has played *Turrican* and *Turrican II* on the Amiga with pirated versions, because they had disk swaps."

And to top it all off, Accolade's console ports of *Turrican II* were even more of a

» [Amiga] The wind pushes you back at this stage of *Turrican II*, forcing you to find another way around.

» In addition to the compilations, SNES and Mega Drive carts of *Super Turrican 1 & 2* and *Mega Turrican* have been reissued by Strictly Limited Games and will be shipped next year.

DIGITAL RESTORATION

RETURNING SUPER TURRICAN TO ITS FULL GLORY

When Factor 5 was developing 1993's *Super Turrican*, the team thought it would be shipped on an eight-megabit SNES cartridge. But around three-quarters of the way through development, when the game was already clocking in at around six megabits, the publisher told the developers they'd only be getting a four-megabit cart, necessitating some frantic editing. "We had to cut out one of the stages which was already finished," says Julian Eggebrecht, and other elements were cut too, like the ability to use the plasma beam to freeze enemies.

Luckily, Julian kept a disk containing the original version of the game. Then in 2008, Nintendo asked whether Factor 5 wanted to put *Super Turrican* on the Wii Virtual Console, and Julian saw his chance to release the uncut version, which he submitted to Nintendo. But the Japanese firm wasn't happy with the switch. "They said, 'This isn't exactly the version that shipped.' I said, 'True, but this is the version it was intended to be, wouldn't it be cool to release that?' And it went all the way up to [Satoru] Iwata-san, and he put his foot down. He said, 'No, Virtual Console is Virtual Console. If this never shipped on a console, then you cannot release it."

Julian had to wait until 2017 for another opportunity to release the *Director's Cut* version of *Super Turrican*, with the advent of Analogue's Super Nt retro console. "The head of Analogue had read interviews of mine about the *Director's Cut*," says Julian, "and he said, 'We want to have something special in the Super Nt.'" Consequently, Analogue's console came with *Super Turrican Director's Cut* built-in, marking the first release of the cut content. But now, Factor 5 has teamed up with Strictly Limited Games to release the *Director's Cut* on the PS4 and Switch as part of *Turrican Anthology Vol 1*, which also includes the original SNES game, *Turrican* and *Turrican II*, and *Mega Turrican Score Attack*. "It's the first time that this version will actually make it out to a larger public," says Julian, "so I'm pretty thrilled about that."

» [Super Nt] Analogue's Super Nt was the first way you could commercially play the *Director's Cut* of *Super Turrican*.

UPGRADING TURRICAN

A TRIPTYCH OF RE-RELEASES IS ON THE WAY

To celebrate the series' 30th anniversary, ININ Games is releasing *Turrican Flashback* on the PS4 and Switch. Costing €29.99, the *Flashback* collection includes *Turrican*, *Turrican II*, *Mega Turrican* and *Super Turrican*, and it will be available in physical form at retailers as well as in a digital version.

Meanwhile, Strictly Limited, which shares a parent company with ININ Games, has created *Turrican Anthology Vol 1* and *Vol 2* for hardcore fans. The first volume contains the Amiga versions of *Turrican* and *Turrican II*, the SNES games *Super Turrican* and *Super Turrican Director's Cut*, and *Mega Turrican Score Attack*, a unique title that was created by Factor 5 for the Gamescom expo. *Volume 2* features *Turrican III*, *Mega Turrican*, *Mega Turrican Director's Cut* (which restores the cut second stage) and *Super Turrican 2*, along with *Super Turrican 1 Score Attack*.

Each volume costs €34.99, and they're available through the Strictly Limited website, although cofounder Dennis Mendel says the company is additionally looking into offering a digital release. There's also a €99.99 *Collector's Edition* that includes both volumes in addition to various items, such as a soundtrack CD, art book and Blu-ray documentary featuring developer interviews conducted by Digital Foundry's John Linneman and Audi Sorlie. The even fancier €199.99 *Ultra Collector's Edition* has already sold out.

Audi, who has been helping to put the anthology together, notes that a few old bugs have been fixed, and each game now has an optional shader to mimic a CRT monitor. But he says the biggest change has been modernising the control schemes to banish the much-hated 'up to jump'.

The anthology doesn't include everything: notably missing are the C64 games, which Audi says is down to licensing issues. "We tried to get everything in there," he says. "But there are still certain aspects of the [C64 games] that are tied up in some sort of legal issue."

The decision to split the anthology across two releases has also caused some controversy. Dennis explains: "We had to evaluate how we can make this economically feasible. We can't ask for €50 or €60 [for a single release] when people see triple-A productions at the same price." He says the games might seem expensive, but that reflects the huge amount of effort that has been made to obtain licences and get them running on modern machines, not to mention the relatively small audience. "People don't see the work that goes into the emulation stuff: optimising, adapting control schemes, and everything related to the Sony and Nintendo guidelines."

One thing that has surprised both Audi and Dennis is finding loyal pockets of *Turrican* fans outside Europe, even though many of the games weren't released overseas. "People like Yuzo Koshiro, the *Streets Of Rage* composer, and [Naoki] Horii-san, who runs M2, I mean, they are huge fans of *Turrican*," says Audi.

» [Mega Drive] *Turrican II* got an unwelcome makeover on the Mega Drive, as Accolade reskinned it to tie in with the Jean-Claude Van Damme movie *Universal Soldier*.

» [Game Boy] The first two *Turrican* games were miraculously converted to the Game Boy, although they were extremely hard to play on the Game Boy's miniscule screen.

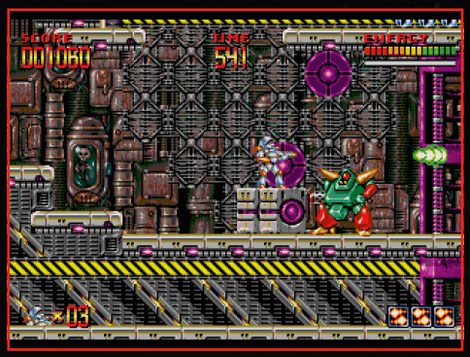
▶ disappointment. The publisher had acquired the rights to make a game adaptation of the Jean-Claude Van Damme movie *Universal Soldier*, so they ordered The Code Monkeys to reskin *Turrican II* to tie in with the film. Accordingly, the walking eyeballs were swapped for mini tanks and the steel dragon boss for Dolph Lundgren on the Mega Drive and Game Boy. "God, that was so bad," opines Julian.

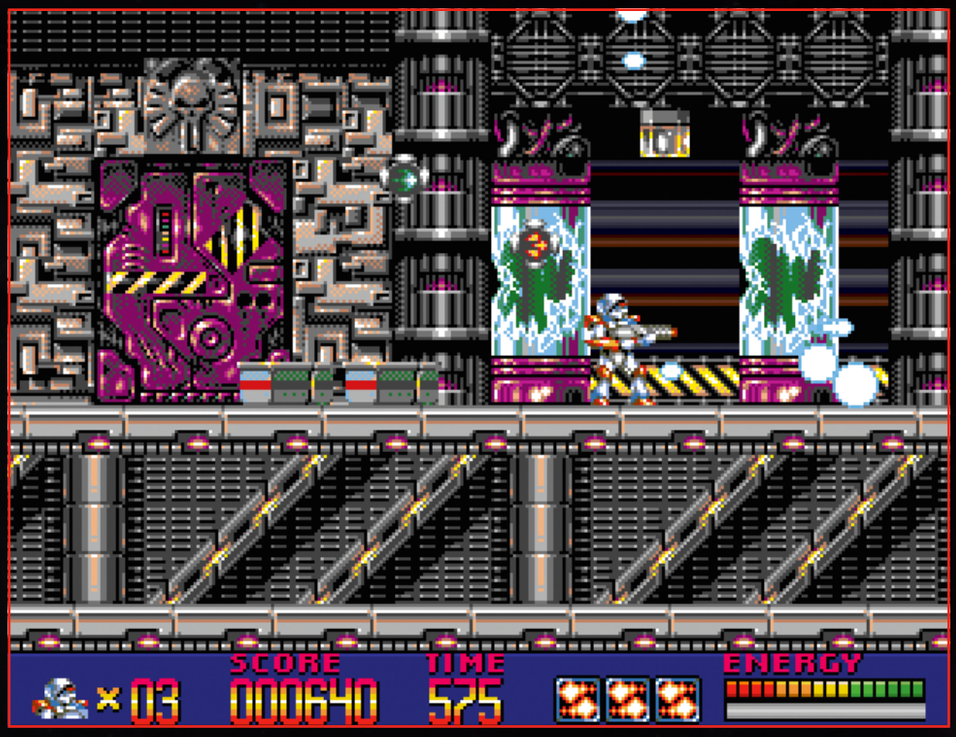
The release of *Turrican II* represented a parting of the ways. Julian left Rainbow Arts to fully join Factor 5 in Cologne, while Manfred returned to his hometown. Both now focused on developing *Turrican* for consoles.

Manfred started work on a NES version of *Turrican*, which was confusingly named *Super Turrican* – the same name as the Super NES version, which was also released in 1993, even though it was a completely different game. Julian explains: "The way the name came about is because everything had to be super. We said, like, 'Why the hell would you name a NES game Super?' But Rainbow Arts or Imagineer, our distribution partner, they insisted on it. We all thought that was stupid."

Unfortunately, *Super Turrican* ended up falling far short of its potential. "It's kind of a sad story in a way," says Julian. "It's a cut-down version of *Turrican* – and really, severely cut down – which isn't Manfred's fault, because the crazy thing was Rainbow Arts was so cheap at the time." Many NES games, like *Super Mario Bros 3*, used memory management controller

» [Amiga] It wouldn't be a videogame without a giant, slow-moving lift.





» [Amiga] These creepy glass tubes can be smashed in *Turrican III*, causing them to spill their gloopy contents.

(MMC) chips to expand the capabilities of the console. But Julian says that Rainbow Arts refused to pay for an MMC chip for *Super Turrican*, meaning it was impossible for Manfred to recreate the full *Turrican* experience. "It's amazing that he got it going at all," says Julian, "if you know how little the stock NES can do."

Meanwhile, Factor 5 had engineered Mega Drive and Super NES development kits. "We used our hardware guru," says Julian, "who was working in the hardware department of the German Secret Service. And he had hardware analysers to basically reverse engineer stuff. So we took a Mega Drive and a SNES and gave them to our hardware guy, and six months' later – POP – out come development kits. And since the statute of limitations has run [out], I can also say we started selling those to other developers: ours were better than the stock Nintendo one, and they were a hell of a lot cheaper!"

> "THE QA FOLKS WERE ABLE TO GET INTO NOOKS AND CRANNIES, AND GOT STUCK EVERYWHERE"
> **JULIAN EGGEBRECHT**

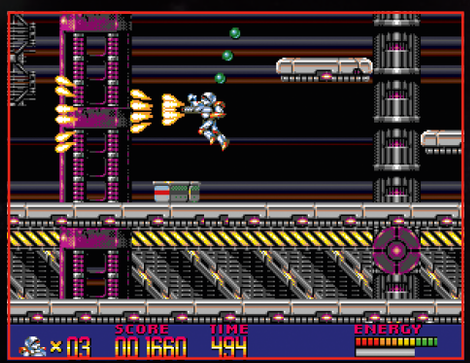
Dev kits in place, Factor 5 set about taking advantage of the Super NES's graphical oomph, with Holger leading development. "*Super Turrican* was always meant to be a 'best of'," says Julian. "We wanted to do a mix of *Turrican* and *Turrican II*, using Mode 7 for a few effects." They designed the game with an eight-megabit cartridge in mind, but in late 1992, they received a bombshell from Rainbow Arts: the publisher would only offer them a four-megabit cart. Julian was outraged: "I mean, it was the year of *Street Fighter II*, where everybody else had moved on to 16 megabits. It was ridiculous." By that point, *Super Turrican* clocked in at around six megabits, and the decision to go with a four-megabit cart meant ditching a bevy of material, which has only recently been reinstated with the *Director's Cut*.

After years of doing ST ports, Thomas Engel finally got the chance to be the lead developer on *Turrican III*, aka *Mega Turrican*. The headline change for this game was the replacement of *Turrican*'s signature plasma beam with a multidirectional grapple, inspired by the whip-swinging in *Super Castlevania IV*. But implementing it without breaking the game proved a nightmare, says Julian: "The QA folks were able to get into nooks and crannies, and got stuck everywhere."

The prototype for *Turrican III* was developed on the Amiga, but Rainbow Arts, alarmed by the decline of Commodore's computer, decided that production should be switched to the Mega Drive. Luckily, the two machines both used a 68000 chip, so porting the prototype was relatively simple. Development on the Super NES and Mega Drive games went on concurrently throughout 1992.

Meanwhile, an Amiga version of *Turrican III* was suddenly put back on the table. Chris Huelsbeck had left Rainbow Arts in 1990 to form Kaiko with programmer Peter Thierolf and graphic artist Frank Matzke, and the studio released the beautiful Amiga shooter *Apidya* in 1992. But the firm was in financial trouble, and Julian notes there was "horrible infighting" among the trio. So Factor 5 brought Frank on board to do the graphics for *Super Turrican* and *Mega Turrican*, while Peter got in touch with Rainbow Arts to ask whether he could program an Amiga version of *Turrican III*. Despite nixing an Amiga release, Rainbow Arts agreed, and Thomas sent across *Mega Turrican* code for Peter to port onto the Amiga.

Mega Turrican was almost complete by the end of 1992, but it wasn't released until 1994 owing to protracted publisher problems.



» [Amiga] *Turrican III* introduced a multidirectional grapple that could attach to any surface – which caused all sorts of problems in development, as QA testers regularly got themselves stuck.

"Rainbow Arts couldn't hack it, so at the end of the day we had to find a publisher ourselves," says Julian. "We were talking to Konami, because we did *Contra III* and *Animaniacs* on the Game Boy, and for a while we were also slated to do *Castlevania* on the Genesis. And part of that larger deal was that they would publish *Mega Turrican*." But the Japanese publisher had a problem with one particular level. *Mega Turrican* was mostly a mix between Japanese-style left-to-right shooting and more exploratory gameplay, but the second stage was almost entirely free-roaming, and Konami insisted it should be removed, worried that it wouldn't sit well with Japanese and American sensibilities. Factor 5 took out the level, hiding it behind a code – but even so, the negotiations broke down, and *Mega Turrican* was eventually published by Data East.

Confusingly, even though it was finished after *Mega Turrican*, *Turrican III* on the Amiga actually came out first, in 1993. And because it wasn't part of the contract negotiations with Konami, the cut second level remained intact on the Amiga – although otherwise the games were nigh-on identical. The Amiga game uses the same source code as the Mega Drive version, but because Peter didn't have access to any of the Mega Drive's fancy graphics hardware. "He had to figure out ways and means to actually simulate all of the different effects," says Julian, "and he did a great job." Both games also feature another banging soundtrack from Chris Huelsbeck, marking his first foray into FM music.

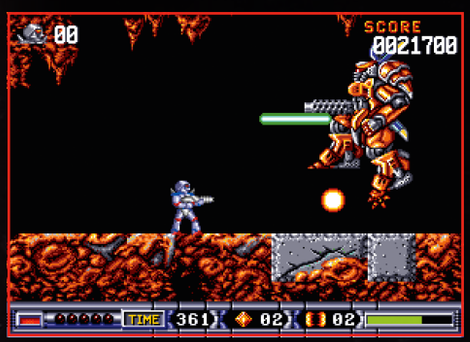
> "RAINBOW ARTS COULDN'T HACK IT, SO AT THE END OF THE DAY WE HAD TO FIND A PUBLISHER OURSELVES"
> **JULIAN EGGEBRECHT**

The final game in the series was *Super Turrican 2* on the SNES, and it marked a change of direction, says Julian. "We said, 'Okay, why don't we go all out?' Why don't we almost completely move away from the freewheeling designs, and actually try to do a very Japanese game throughout?" As such, *Super Turrican 2* is a much more linear affair than previous entries, but it has some truly impressive visual effects, thanks in part to Factor 5 finally bagging a 16-megabit cart.

The focus on Mode 7 effects meant the free-roaming had to be reined in. "Whenever you want to do a lot with Mode 7, then you have to limit your game design to mostly a horizontal design, or only vertical," explains Julian. In addition, the multidirectional grapple was turned into a simpler *Bionic Commando*-style arm, which could "still attach to everything, but it made it easier to handle and much more playable", Julian says. *Super Turrican 2* also saw Chris experimenting with an orchestral soundtrack for the first time.

But for Factor 5, the lustre of *Turrican* had faded by the time of *Super Turrican 2*'s release in 1995. "We were quite frankly a little bit sick of it," says Julian, "and towards the end of it we had moved on because we were working with Konami on *International Superstar Soccer Deluxe*." To cap it all off, Factor 5's already fractious relationship with Rainbow Arts broke down completely. "They actually did an awful deal with Ocean," says Julian. "And we ran over time, so *Super Turrican 2* took about half a year longer than it was supposed to, so they claimed that we were in breach of contract and wanted to recoup the complete money that they paid to us for development." The heated legal dispute marked a sad and premature end for the *Turrican* series.

But Rainbow Arts was eventually sold to THQ, and when THQ went bust in 2012, Factor 5 was able to acquire the rights to the *Turrican* games. This has culminated in the current re-releases (see 'Upgrading *Turrican*' on page 24'), and potentially an entirely new game (see '*Turrican* Returns?' on the next page). The Machine may have been defeated multiple times, but it always finds a way to come back. ✱



» [Amiga] The first boss in *Turrican II* has an obscenely large gun that annoyingly protects its weak spot from being targeted with the plasma beam.

» [Mega Drive] The Machine is the main antagonist in all of the *Turrican* games except for the first one, in which an AI called MORGUL is the big baddie.

» [SNES] *Super Turrican 2* ditched the exploration for a much more straightforward left-to-right format, but with some utterly sumptuous Mode 7 effects.

TURRICAN RETURNS?

A NEW GAME COULD BE IN THE OFFING

» [Switch] The success of the incoming compilations will largely decide the fate of a new *Turrican* game.

Julian Eggebrecht says that Factor 5 will be using sales of the *Turrican* re-releases to gauge the interest of fans in a new entry in the series. If they are a success, he has a few ideas on what the new game will be like: "First of all, we're going to base it in terms of gameplay style on *Turrican II*, because the two best *Turricans* in my mind are actually *Turrican II* and *Mega Turrican*. *Super Turrican 2* goes a little bit too far in the Japanese direction, but *Mega Turrican* actually struck a really nice balance there, and *Turrican II* is the pinnacle of the completely freewheeling thing. So we would definitely base it on *Turrican II*, with a hint of *Mega Turrican* in there in the sense that some physics-driven stuff would be really awesome.

"The other thing is, to make the fans happy, what I would truly like to have is an online ability for the community to design their own levels." Julian notes that the problem with many retro revivals is that the games can never quite live up to the memories fans have in their minds, so the ideal solution is to let them craft the game as they see fit. "We're going to deliver something which we think is right," he says, "but then at the end of the day, people can build their own levels."

And although Factor 5 has experimented with 3D versions of *Turrican* before – like with *Tornado* for the GameCube and *Turrican: Cyclone* for the PS3, both of which were cancelled – this time around, the team wants to stick with 2D. "We will definitely do a little bit of pseudo-3D, or do the characters as 3D objects," says Julian. "But mostly, it will definitely be pixel art. I mean, it has to be based on pixel art quite frankly, and you can do such gorgeous pixel art these days. I can relate to all of the fans wanting to play another 2D *Turrican*, and I think that's the right way to go."

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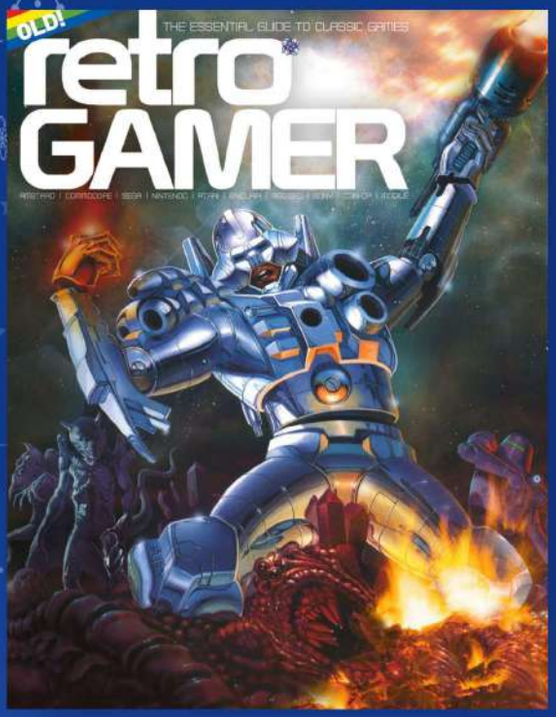

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THE MAKING OF

DAN DARE III The Escape

Trantor and Savage were explosive riots of colour, and Nick Bruty and David Perry wanted their follow-up to follow suit while delivering deeper gameplay. Nick explains how unicycles and crazy jet racers led to Dan Dare III

WORDS BY RORY MILNE

IN THE KNOW

PUBLISHER: VIRGIN GAMES

DEVELOPER: DAVID PERRY AND NICK BRUTY

RELEASED: 1990

PLATFORM: AMSTRAD CPC, VARIOUS

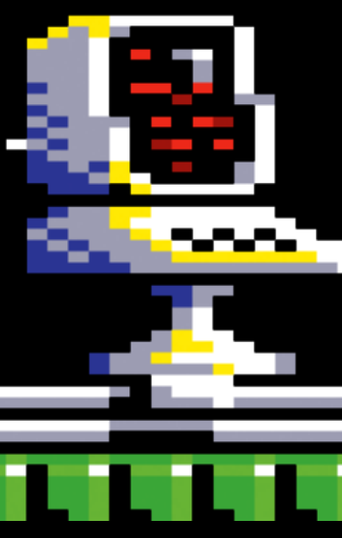
GENRE: ACTION

It was clear from David Perry and Nick Bruty's earliest collaborations that the pair were determined to push 8-bit computer gaming to its limits – *Trantor: The Last Stormtrooper* and *Savage* were part shoot-'em-up, part fireworks display. But the huge heroes and horizontally fixed nature of these shooters restricted their gameplay, which, as Nick points out, was something that they wanted to address with their next project. "We had frustrations with *Trantor* and *Savage* – with the running left and right," Nick remembers. "It just really limited what you could do gameplay-wise, and going to eight-way scrolling gave us some more options. The player characters also took up the middle of the screen, so you only had half a screen to react in – as opposed to flip-screen games, which gave you more room to see ahead of yourself. I actually would have liked to have taken the size of the player character down even smaller for *Crazy Jet Racer*, but we wanted to keep a certain colour and look to it."

Inspiration often comes from unlikely sources, and *Crazy Jet Racer* proved this theory in that it briefly took its lead from its developers' latest passion – unicycling. "We didn't really get to the crux of it," Nick notes regretfully, "but the idea behind that was momentum. The player character would run and then kick his legs up, and then speed along on his unicycle. Really, where we were ultimately going to go was where *Sonic The Hedgehog* went years later – with slopes and angles, but we didn't know how to do that yet. Instead, we built out the tech that we had at the time."

While keeping the name *Crazy Jet Racer*, the developers reimagined their project as a shoot-'em-up with the visual flare of their previous efforts coupled with innovative mechanics, such as a store selling weapons, ammo and other supplies. "I think it just felt like a natural progression for us to add a little more, and I liked the idea of a store," Nick reasons. "But I'd say that in execution the game wasn't long enough and levels big enough to really make that payoff as a nice way to manage your weapons. We wanted to expand things a little more, but we didn't really have the time to flesh it out further than we did."

»Nick Bruty now is the art director for developer Other Ocean Emeryville in California.



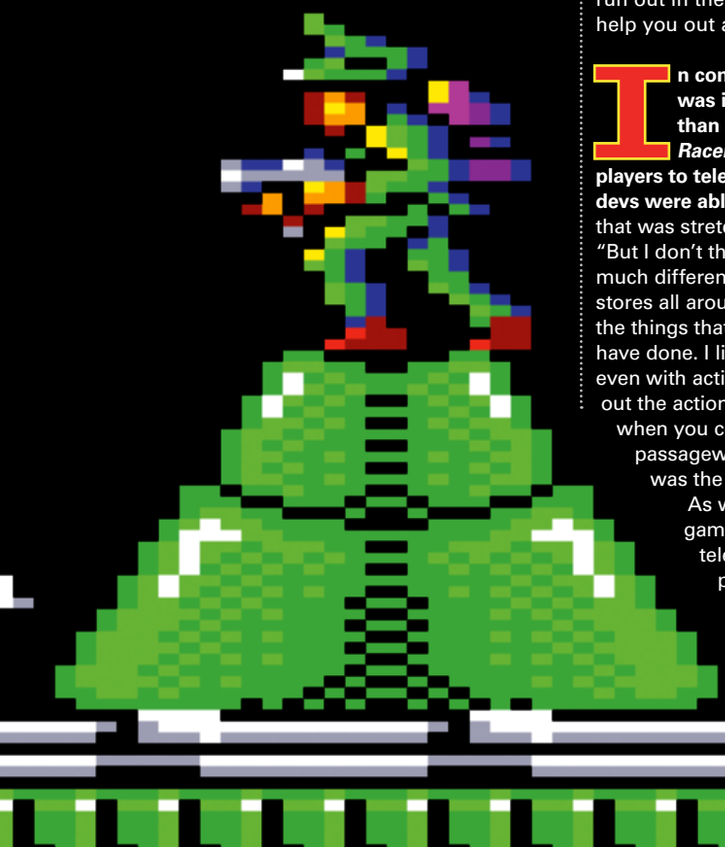
» [Amstrad CPC] Seconds into *Dan Dare III*, its hero dispatches an alien foe causing a colourful explosion.

» [Amstrad CPC] You get funds to spend in *Dan Dare III*'s store by blasting aliens and finishing levels.

Of course, there had to be a way to raise funds to spend in *Crazy Jet Racer*'s store, but instead of scattering currency around the game's levels, Nick and David rewarded players with credits for blasting aliens and levelling up. "We couldn't go at it from the thought that players were going to explore a maze and find cool stuff because the levels just weren't really big enough to support that," Nick explains. "There were probably also memory constraints as well. That was the one thing when we were making a game with large colourful graphics – it tended to burn through the RAM pretty quick and not leave you a lot of space for other things."

But despite the constraints of their game's levels, the developers did find room to hide limited supplies of plasma rifle ammo on each of *Crazy Jet Racer*'s stages. "I think we just didn't want players to run out of ammo in the middle of levels," Nick considers. "In some ways, you should never run out of ammo for your base gun, so it was a little unfair of us to allow that to happen. But that was definitely the thinking behind it; you could certainly top up the ammo in the store, but since you could run out in the middle of a level, we wanted to help you out a bit."

> "I THINK WE JUST DIDN'T WANT PLAYERS TO RUN OUT OF AMMO IN THE MIDDLE OF LEVELS. IN SOME WAYS, YOU SHOULD NEVER RUN OUT OF AMMO FOR YOUR BASE GUN"
> NICK BRUTY



In contrast, another design decision was intended to be challenging rather than helpful, but by limiting *Crazy Jet Racer* to just one store and requiring players to teleport back to it from later levels, its devs were able to extend game time. "I imagine that was stretching things out," Nick confirms. "But I don't think it would have made that much difference to the memory used to put stores all around the place, and that's one of the things that if we'd had more time we would have done. I liked the exploring side of things; even with action games I liked that to balance out the action. It made it more interesting when you could hide little areas and secret passageways. But only having one store was the choice we made at that point."

As well as beaming back to the game's store, *Crazy Jet Racer*'s teleporters could also transport players from stage to stage, but instead of dematerialising and then rematerialising, they had to negotiate geometric

CONVERSION Capers

WHICH VERSION OF DAN'S THIRD ADVENTURE IS THE BEST?

AMSTRAD CPC

Essentially a shooter with a supplies store set in mazes full of aliens, the brightly coloured Amstrad original has explosions to rival Guy Fawkes Night. Its restrictive playfield gives you nowhere to hide and your foes little chance to avoid your weapons, and its teleporter stages are a nice change of pace.

ZX SPECTRUM

Visually, the Spectrum version is more detailed but uses less colours than its CPC counterpart, although it's still *very* colourful for a Sinclair game. It also differs in terms of audio, in that it has a pregame tune and less impressive sound effects. It does, however, play identically to the Amstrad iteration.

COMMODORE 64

The C64 *Dan Dare III* wisely plays to its host's strengths, so there's some great title music, satisfying sound effects and metallic graphics. It has the same levels and challenges as its 8-bit rivals, but its gameplay isn't quite the same – there's less ammo, fewer foes and different techniques to beat its bosses.

AMIGA

The more expansive screen estate and larger stages of the Amiga variant radically change the original game's dynamics, and in doing so lose a lot of their tension and excitement. The 16-bit Commodore version does have some nice music and sound effects, but its visuals don't capture *Dan Dare* as well as the 8-bits.

ATARI ST

There's very little between the Amiga and Atari ST *Dan Dare III*. The ST game doesn't sound quite as good, but it plays the same tunes and renders the same sound effects. Graphically, the ST version just loses out to the Amiga, but there are no differences in terms of their gameplay, which seems a bit flat and drawn out.

Escaping DAN DARE III

HOW TO STAY ON TOP OF THIS THREEQUEL

TROUBLE IN STORE

You start out with just four lives and a plasma rifle, but these will only get you so far. Fortunately, the game's opening level has an electronic store that sells ammo, various weapons and extra lives. Later stages don't have stores, however, which means you have to teleport back to level one when you need supplies.

CHOOSE YOUR WEAPON

There are three weapons of ascending firepower: the aforementioned plasma rifle, which spits out ammo in a straight line; bouncing bombs, which ricochet around and explode on contact; and nukes, which wipe out every visible alien. The trick is to select the weapon that's appropriate to the threat that you're facing.

BE PREPARED

Forward planning is vital. You get one shot to teleport back to the store from each level, so make sure you have enough energy to make the trip, even if it means sacrificing an almost-spent life before you beam out. There are also foes hiding around every corner, so fire off a warning shot before breaking new ground.

wormholes in space. "*3D Deathchase* was one of our favourite games," Nick says when asked about the teleporters, "so we were always trying to capture some of that. Dave wanted a vector look, because it was going to be smoother – and starfields. But shooting stuff in a pseudo-3D section was a tricky thing to do. You had to do a lot of tricks to get the speed up, and store a lot of frames of animation, so that was just a bit too much – although the teleporter sections would definitely have benefitted from a little extra action."

However, other areas of *Crazy Jet Racer* benefitted from having *less* action, in so far as the game's firefights were made more manageable by being dialled down from the level set by those of its predecessors. "The AI in *Savage* and *Trantor* was very simple, and so you were constantly under pressure from being attacked," Nick acknowledges. "There was no area of peace really, although less so maybe in *Savage*. In *Crazy Jet Racer,* the aliens mostly stuck to certain areas, and you could fly up to platforms and hang out without being under attack all of the time. You also had bouncing bombs that you could throw in and let them do the damage ahead of time."

» [Amstrad CPC] You're often pinned down under fire in *Dan Dare III* due to the game's minimal playfield.

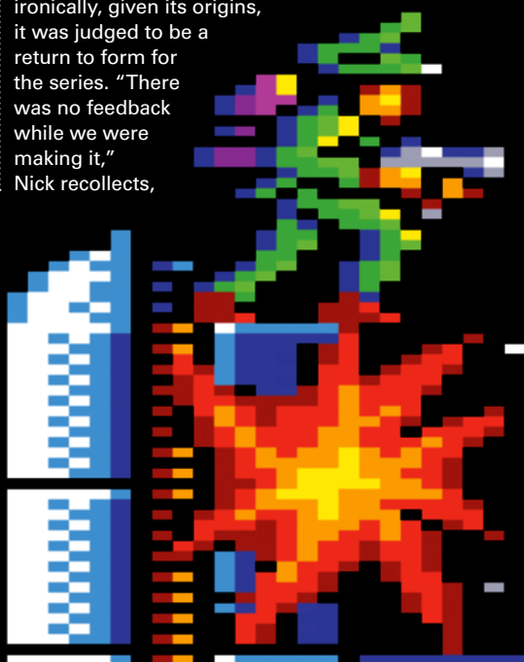
After gauging *Crazy Jet Racer*'s difficulty, radical changes followed, thanks to an offer Nick and David were given to adapt their game to take advantage of a licensing deal. "I think when we were given the opportunity to take on the *Dan Dare* licence and convert our game over to that, it was getting harder to push original titles," Nick recalls. "*Savage* hadn't sold that well and neither had *Trantor*, despite getting attention, so when this licence turned up and Fergus McGovern brought it to us we looked at the first two *Dan Dare* games and thought they were nice games, and we decided to go for it."

Despite being a great opportunity, one downside to converting *Crazy Jet Racer* into the third *Dan Dare* game was that it had to be released 40 years to the day from the Pilot Of The Future's first appearance, which put limits on how much could be changed. "There wasn't a lot of time to switch things around," Nick admits, "I definitely remember it being pretty tight. I don't remember how much time we had to do it, but it was probably just a couple of months. If we had been going to do *Dan Dare III* from the ground up, it would have been nice to take six months or something like that. Instead, we were taking our game and then switching it up to something you would recognise as *Dan Dare*. And we got about halfway there!"

> "WHEN WE WERE GIVEN THE OPPORTUNITY TO TAKE THE DAN DARE LICENCE AND CONVERT OUR GAME OVER TO THAT, IT WAS GETTING HARDER TO PUSH ORIGINAL TITLES"
> NICK BRUTY

The effort to make *Dan Dare III* reflect its source material largely fell to Nick, as swapping out sprites would require far less time than making changes to its gameplay. "There were a lot of cool designs back then in the *Dan Dare* strips," Nick enthuses. "I liked the Mekon and all of that stuff, and I'd have liked to have spent more time designing around that, but I had very little time to just do the sprites for it, so I'm just glad the Mekon made it in there! I think the giant bird bosses were original creations, but I was thinking of them in the *Dan Dare* world."

Given the value of the *Dan Dare* IP, some form of oversight on his third game would have been reasonable, but instead it was reviewed without being tested, and ironically, given its origins, it was judged to be a return to form for the series. "There was no feedback while we were making it," Nick recollects,



EXPLORE EVERYWHERE

There's a secondary objective of finding five fuel cans that are scattered throughout the levels, and these are *not* hidden in plain sight. What this means is that you have to search every nook and cranny in the game in case there's precious fuel hidden in one of them, but watch out for aliens as you enter and exit.

WHO'S THE BOSS?

It may seem counterintuitive, but the bosses aren't as tough as the core aliens. Technically, that's not true; the bosses take a lot of hits to put down, but they're stationary and their return fire is avoidable, so they're sitting ducks. The main foes are hyperactive, although you can take them out with a few shots.

» [Amstrad CPC] Levelling up in *Dan Dare III* requires navigating our hero through vector graphic-style squares.

DEVELOPER HIGHLIGHTS

TRANTOR: THE LAST STORMTROOPER
SYSTEM: AMSTRAD CPC, VARIOUS
YEAR: 1987

SAVAGE (PICTURED)
SYSTEM: AMSTRAD CPC, VARIOUS
YEAR: 1988

EARTHWORM JIM
SYSTEM: MEGA DRIVE, VARIOUS
YEAR: 1994

» [Amstrad CPC] You can reload Dan's plasma rifle in the game's store or seek out hidden ammo.

» [Amstrad CPC] Bouncing bombs are an effective weapon against the most erratic aliens in *Dan Dare III*.

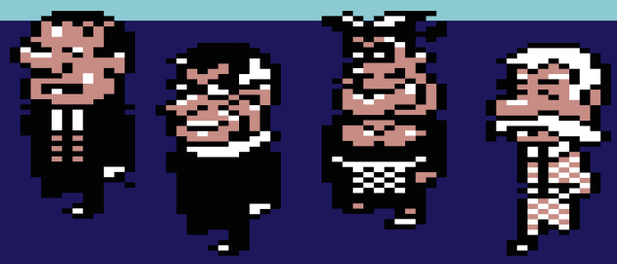
"we just made the game, finished it and sent it off. So our first sense of what anybody thought about it was the reviews. They were flattering in whatever way you wanted to take them! But it did feel odd as well. When I looked at the previous games and looked at ours, well ours just looked like one of our games. So I was glad everyone thought that it looked like a *Dan Dare* game."

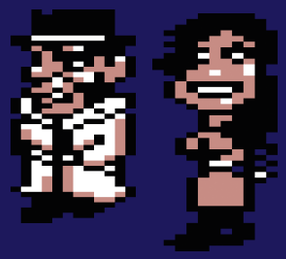
Decades later, and with a wealth of gameplay design experience under his belt, Nick offers a number of suggestions for changes that he would make to the converted *Crazy Jet Racer* given hindsight. "I hadn't looked at it in a long time, and I always think my old games aren't going to look good," Nick acknowledges, "but when I went back to it I was pleasantly surprised. It would have benefitted from using the weapons in more interesting ways; you could have designed levels around that. I also really like the idea of scrolling *and* flip-screens, because you had those bouncing bombs and in a flip-screen you could have come in from the top corner and thrown them in and watched them just bounce around!"

» [Amstrad CPC] The nukes in *Dan Dare III* are expensive, but sometimes they're your best option.

In his final assessment of *Dan Dare III*, Nick's only real regret demonstrates that he still has an eye for visual flare, but that aside, he's pleased with his work. "I would have loved to have done more with the Mekon, because he's a cool-looking character," Nick reflects. "So yeah, we really should have tried to find a way of making him more animated and interactive. But overall, looking back at it, I feel happy. There's a few [games] in the past that I don't like talking about, but this one's alright!" ✱

THE MAKING OF THE DETECTIVE GAME





ANGUS MCFUNGUS IS DEAD AND ANY ONE OF THE MOTLEY CREW OF GUESTS AND SERVANTS AT THE MANOR HOUSE COULD BE THE CULPRIT. CAN YOU EXPOSE THE MURDERER BEFORE BECOMING THEIR NEXT VICTIM?

Words by Paul Drury

IN THE KNOW

- **PUBLISHER:** ARGUS PRESS
- **DEVELOPER:** SAM MANTHORPE
- **RELEASED:** 1986
- **PLATFORM:** COMMODORE 64
- **GENRE:** SLEUTH-'EM-UP

DEVELOPER HIGHLIGHTS

OUT ON A LIMB
SYSTEM: C16/C64
YEAR: 1985

HYPER BLOB (PICTURED)
SYSTEM: C64
YEAR: 1987

We think we've solved this whodunnit. It was Sam Manthorpe, in the bedroom with the Commodore 64. "Yes, *The Detective Game* was all done in my bedroom at home, and the plot, characters, sets, music, sound effects and coding were all mine," confirms Sam, "though I had input from friends and Paul Jay did the sprites. I was 18 years old, doing my A Levels, and it took me the better part of that year. I was given a simple mandate by The Magnificent Seven: write a game about a detective story."

No, Sam wasn't in the employ of Yul Brynner and his gang. The Magnificent Seven was the company formed after Anirog Software cofounder Anil Gupta split with business partner Roger Gamon (Anirog was an amalgam of their Christian names) to form Anco. "Roger sadly died of a brain tumour not long after," says Sam. "He was a lovely man and I owe him a debt of gratitude for publishing my first game, *Out On A Limb*, and agreeing to publish more."

Sam's debut was an entertaining homage to *Jet Set Willy* (see **RG168** for the full story) but his follow-up proved far more ambitious. Taking on the role of Inspector Snide of Scotland Yard, you are summoned to McFungus Mansion to investigate the murder of its wealthy owner. Once Bentley, the snooty butler, has shown you to your room, you can begin exploring the manor house, searching for clues, questioning the eccentric array of characters and trying to expose a murderer who is still very much at large. The game plays out in real-time and there are many dramatic twists in the plot, from bombs under the bed to death by falling piano. "There was definitely a timeline to events but it was all in my head," smiles Sam. "There was an algorithm to determine when the piano drop would happen, for example. And the characters seem to be saying random things but some of them are clues!"

The cast, from glamorous Cynthia Sludgebucket to the uptight Reverend Wrinklebum, are clearly inspired by Agatha Christie archetypes and *Cluedo* characters, and when it comes to the bumbling Major, Sam obviously grew up watching *Fawlty Towers*. All are brought to life through some nicely animated sprites and we always had a soft spot for Hilda Crumble, the cook, and her heaving bosom.

"Those bouncing boobs are mine," giggles artist Paul Jay. "I was sent the names of the characters but their appearance was all down to me. I could never understand why the graphics in other games at the time were always flat. I tried, by

© A.P.S. SOFTWARE 1986
THE DETECTIVE GAME
Sam Manthorpe
THE DETECTIVE GAME - WRITTEN BY SAM
INSPECTOR SNIDE:
SCOTLAND YARD DETECTIVE PLAYED BY YOURSELF.

» [C64] If you get stuck, you could watch SpiderMwa's entertaining and revealing five-part YouTube walkthrough. But Columbo wouldn't.

» Sam is delighted that people are still enjoying his clever whodunnit.

> "I HAD A TIMELINE TO ALL THE EVENTS IN THE GAME IN MY HEAD. THERE WAS AN ALGORITHM TO DETERMINE WHEN THE PIANO DROPS!"
> SAM MANTHORPE

» [C64] Sam credits his friend's dad, Roger, for coming up with such names as Cynthia Sludgebucket and Reverend Wrinklebum.

» [C64] The game plays out in real time and if you can't solve the case in 140 minutes, prepare to be the next victim…

» [C64] From Sam Spade to Columbo, raincoats are de rigueur for detectives and Inspector Snide is no exception.

making three-quarter turns, to make them look more three dimensional."

"I received a file of sprite images from Paul on a floppy disk and they looked great," agrees Sam. "Much better than anything I could have done, though the walking animations were sometimes a bit wonky."

Talking of wonky, though the game has a clever icon-driven control system, allowing you to examine objects, interrogate suspects and gather evidence, the cursor often feels like it has a life of its own. "My biggest regret is that joystick menu control," sighs Sam. "It was inspired by *Spy Vs Spy*, which I think is the greatest game ever written for the C64, but my [system] is incredibly annoying. I had been experimenting with using Newtonian physics in user interfaces, a la *Sheep In Space*, and wanted to try it out. What a terrible idea!"

The awkward controls and slow pace meant reviewers at the time often dismissed *The Detective Game* as pretty but dull. That's a real shame, as this is a game that rewards patience. Discovering a secret passageway after meticulously searching every wall, or the thrill of finally getting your hands on the genuine will and realising who actually benefits from the crime are wonderful moments in a game full of big surprises and little details. The ominous music that plays when you stumble across a fresh corpse, the way the thunder follows a few seconds after a lightening flash and the 'shot in the dark' denouement all add to an atmospheric and absorbing experience.

Yet only the most persistent detectives will have unmasked the killer. The game requires you to collect ten pieces of evidence before you can accuse a suspect but only six of these are marked with a handy 'E'. We assume this was because you wanted to fully engage players' deductive powers and force them to determine whether the bundle of notes or the cutting from *The Times* is key to cracking the case, Sam? "Erm, I wasn't aware that all ten items of evidence weren't marked with an E," he replies, sheepishly. "That was a bug. We didn't have QA back then…"

» Sam (holding joystick) playing on the C64 he used to write all his games on, with his brother Jack looking on.

Even if you never worked out who the murderer was, *The Detective Game* is one of those 8-bit titles that you can return to with a sense of admiration for what the author was trying to achieve on limited hardware. Sam would produce one more game, *Hyper Blob*, before heading to university and leaving the games business behind, but his fondness for Inspector Snide's last case goes far beyond the £2,000 he was paid for producing it. "I've had personal accounts from people telling me how much they loved the game, people posting complete walkthroughs on YouTube, Lucas Lund being inspired to write a book and now this article, over 30 years after I wrote it," says Sam. "It all makes me super happy."

» [Nintendo DS] A homebrew version of *The Detective Game* is available for the Nintendo DS, a testament to the enduring love the game inspires.

BOOK 'EM, DANNO

» Writer Lucas Lund keeps his 'beady' eye on the suspects.

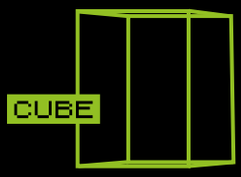
Since *The Hobbit*, books have often provided inspiration for computer games, but for Swedish author Lucas Lund, it's worked in reverse. "I first played *The Detective Game* when I was 11 years old and it really caught me," he says. "I liked the combination of good graphics and mystery, and the search for a killer who is obviously still in the building and highly active made it scary. The scene with the crushed Cynthia under the piano is iconic!" Though he never apprehended the murderer, Lucas' love for the game remained undimmed and when in 2018 he was looking for a subject for his next novel, it felt a natural fit. "I want to recreate the atmosphere, bring the characters to life, give them a background and make the reader develop a relationship with Inspector Snide. And of course, Cynthia and the grand piano will be part of the story." Expect a Swedish version in 2021 with an English translation to follow. You can keep up with Lucas' progress over at instagram.com/the_detective_novel.

ULTIMATE GUIDE

BATTLEZONE

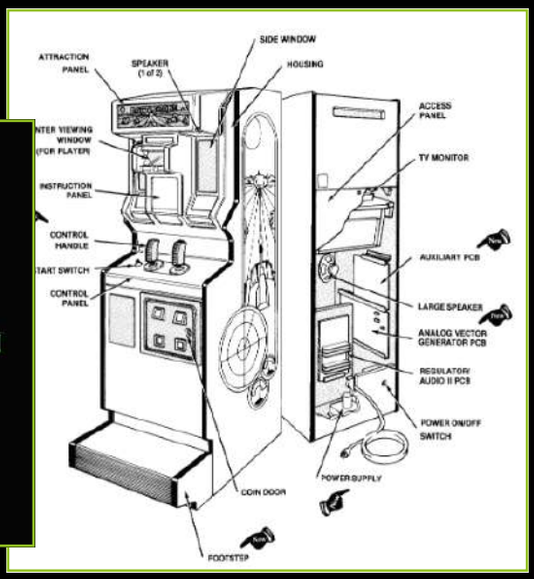
When it comes to a first impression, there are few arcade machines more striking than Battlezone. With the Atari game celebrating its 40th anniversary this year, Retro Gamer takes a look back at this tank-busting classic

Words by Graeme Mason



» *Battlezone*'s arcade manual succinctly annotates the machine's famous peripherals.

» [Arcade] Taking cover as an enemy approaches, weapons armed.



Standing at over six feet tall with its outward-jutting marquee, twin joysticks and famous periscope-style viewfinder, *Battlezone* is one of the more unique videogames to have featured in arcades during the Eighties. And it wasn't just a physical presence: the game it housed, a beautifully clean vector graphics tank sim, remains a compulsive and striking experience, and one laden with a fascinating history.

Designed by Atari's Ed Rotberg, with assistance from Owen Rubin and Roger Hector, *Battlezone* is a futuristic fight to the death against a never-ending legion of enemy tanks, UFOs and missiles. The game takes place inside a simulated barren valley, with occasional angular objects providing cover relief and a precise mountainous horizon overlooking proceedings in the far distance.

» [Arcade] Incoming fire must be dodged either by using speedy evasive manoeuvres or hiding behind an obstacle.

Sitting within their own tank, the player glides across the landscape, taking aim at the enemy vehicles, which soon become more and more devious. Initially, there are the slow tanks, cumbersome beasts that can easily be outmanoeuvred and destroyed – but care must still be taken, as take one well-placed shot from a foe and a valuable life is gone. Swifter super tanks soon begin to appear, characterised by a sleeker, more futuristic chassis and a single tall aerial protruding into the sky. Yet deadliest of all are the intelligent missiles, large radar-like projectiles that home in on the player's tank. Relentless in their pursuit, these must be destroyed or evaded, while the harmless flying saucers (redolent of one of *Battlezone*'s forebears, *Asteroids*) can be destroyed for a score bonus.

Control of the tank in *Battlezone* is similar to how a tank works in real life. Each joystick commands its respective tread: pushing both sticks forward compels the tank forwards while pushing one stick on its own makes the tank bank to the left or right, depending on which stick is used. The viewfinder, housed underneath the marquee and over a standing plate, is where the prospective tank commander places their face, transforming the game from a standard 2D videogame ▶

Beyond The Zone

SEQUELS, UPDATES AND REIMAGININGS

Battlezone (1998)

■ Activision took a left turn with the *Battlezone* franchise in 1998 with this hybrid first-person shooter/strategy resource management game. Taking a cue from the popular RTS genre, there's an alternate history plot line reminiscent of *Command & Conquer: Red Alert*, and a whole regiment of extra gameplay, oven-ready for Nineties gamers.

Battlezone II: Combat Commander (1999)

■ Taking place within the same timeline as *Battlezone 1998*, this sequel from Activision and developer Pandemic again merges the FPS and RTS genres, once more confusing some fans as to what it was trying to be. While purportedly bugged upon release (especially its multiplayer), the depth and variation is nevertheless there for anyone prepared to put the time and effort in.

Battlezone: Rise Of The Black Dogs (2000)

■ Pretty and technically impressive, unfortunately the lack of variation dogged this reimagining on the N64, which had often boasted gameplay over graphics. There are three modes, but they each amount to much of the same, and with a general lack of explanation for the factions, there's little to connect the player to the admittedly attractive world.

Battlezone (2006)

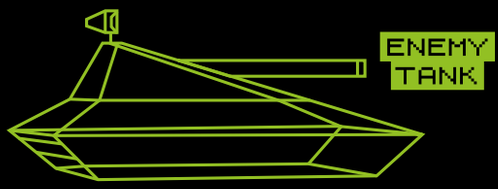
■ With its shift from first-person to third and into the world of futuristic hover tanks, this handheld update for Sony's PSP bears little resemblance to the arcade classic save its base concept. The extra terrain can make targeting a little haphazard and random, but it's still a decent effort, if a little mediocre in places.

Battlezone 98 Redux (2016)

■ With Rebellion being big fans of the 1998 reboot, in addition to the original, this enhancement appeared in 2016, offering remodelled vehicles and structures, and enriched effects. Rebellion went even further shortly after, releasing a revamp of the game's expansion, *The Red Odyssey*.

Battlezone II: Combat Commander Redux (2018)

■ Inevitably, Rebellion lent the same treatment to *Battlezone 1998*'s misunderstood sequel in 2018, showcasing improved graphics and AI, mod support and new multiplayer modes. With gamers perhaps more willing to embrace the twin genres today, it's a good mix of styles and another solid modernisation from Rebellion.



» [Arcade] About time to fire the cannon, we reckon…

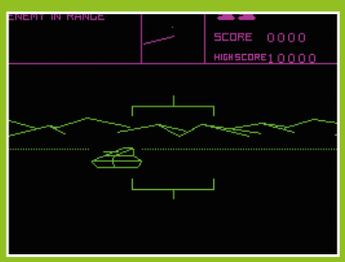
▶ into an immersive 3D experience which predates today's similar virtual reality games by over 30 years.

As with many arcade games of the era, *Battlezone* has no ending; it's a simple fight for fame on the high score table. Normal slow tanks secure 1,000 points, while their speedier brethren notch a valuable 3,000. Taking out a homing missile scores 2,000 points, while those ponderous and distracting flying saucers are well worth eliminating at 5,000 points a pop. The default dip switch setting gives the player an extra life upon 15,000 and 100,000 points, and other than the joysticks (of which the right one has a sole fire button) there are no other controls to *Battlezone*: once mastered, the game distils to a pure cat-and-mouse chase, the hunter and the hunted, kill or be killed. To help the human tank commander against this infinite army of tanks is a useful radar display, which divulges the position of enemies (apart from the flying saucers), while high-tech computer messages appear in the top-left of the screen, warning of flanking enemies or approaching missiles.

Even 40 years later, it's not hard to discern why *Battlezone* was such a revelation back in 1980 – videogames like this, even in the arcades, simply didn't exist. Presenting the action in a 3D panoramic view, complete with its stark isometric shapes, was a revelation, as was the iconic volcano and crescent moon that enshroud the action. Immersion was taken into a new realm thanks to the viewfinder, which encloses the player into their tank, transporting them to this

Conversion Capers

HOW DID THE ULTIMATE TANK BATTLE FARE ON HOME SYSTEMS?



ZX SPECTRUM

■ Despite a necessary change of colour scheme (the original's powerful reds replaced with a rather more flowery magenta), this version is extremely competent, moving at a decent pace and containing everything from the arcade game save an animated volcano and crescent moon. It's just a shame Realtime's *3D Tank Duel* had already beaten Quicksilva to the punch.

ATARI 2600

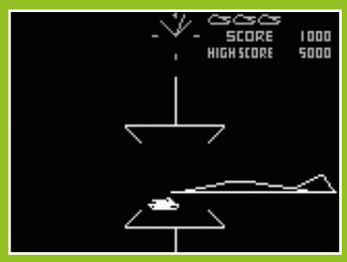
■ While visually very different from the arcade original, this Atari 2600 game is still great to play. Gone is the first-person view, with the player sitting just above and behind their tank, and also absent are those clean vector lines. So, while a *Battlezone* game only in name, there's still plenty of blasting fun to be had here.

COMMODORE 64

■ With its chunky sprite-based graphics, the Commodore 64 port may not appear as you'd expect. Yet while this version doesn't quite look the part, it retains much of *Battlezone*'s frantic gameplay and does a good job of imitating its atmospheric feel. As with the ZX Spectrum, C64 owners already had an unofficial game to play in Damon Slye's fantastic *Stellar 7*.

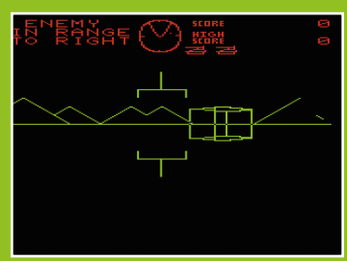
GAME BOY

■ The ambition of converting the overall vector graphics and fast-moving missiles to Nintendo's Game Boy is to be admired, but alas the result is not too endearing. Flickery graphics and a control system that inevitably veers away from the original let the side down, although things are slightly better when played using a Game Boy Advance.



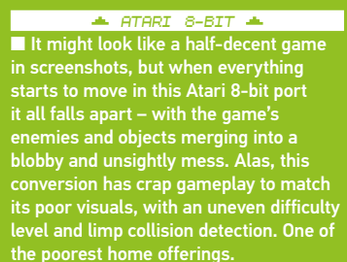
ATARI 8-BIT

■ It might look like a half-decent game in screenshots, but when everything starts to move in this Atari 8-bit port it all falls apart – with the game's enemies and objects merging into a blobby and unsightly mess. Alas, this conversion has crap gameplay to match its poor visuals, with an uneven difficulty level and limp collision detection. One of the poorest home offerings.



VIC-20

■ *Battlezone* on the VIC-20 offers a VR-esque tank battle experience from the comfort of a keyboard. Okay, so flat sprites pop back and forth, and there's a distinct lack of pace, but the game is undoubtedly a reasonable interpretation of the original arcade game visually, and the majority of the original's gameplay elements are present.



ATARI ST

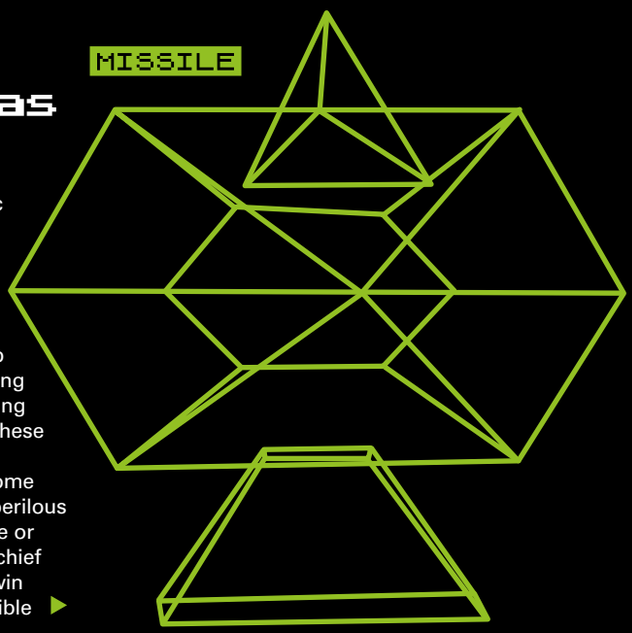
■ With its colourful, filled-in backdrop graphics, upgraded solid target reticule and green shaded information bar, this Atari ST version from 1986 initially feels like a different game. However, the gameplay is unmistakeably *Battlezone*, although whether you can get past the lack of those amazing background vector graphics is another matter.

PC

■ Despite a control scheme that's even odder than *Battlezone* in the arcades, the PC does an admirable job of presenting the game's wireframe graphics and gameplay. And although it's a tad on the slow side, there are tanks, UFOs and missiles to blast, and that spouting volcano in the background to admire.

"I remember being amazed by the vector graphics, and how utterly useless I was at the game"

Jason Kingsley



ethereal zone of the future. And while on the surface it's an unsophisticated experience in terms of actual gameplay, mastering the controls and tactics of your hulking vehicle is not to be underestimated. Utilising the limited obstacles that are scattered around the valley is key – with enemy tanks often appearing suddenly, having one of these angular blocks nearby is a favourable tactic should you wish to avoid that fatal cracked screen.

Given its esoteric landscape and idiosyncratic appearance, it was inevitable that several evocative *Battlezone* myths would arise from the arcades. In hushed voices, gamers would tell of a mysterious castle, sitting within the volcano, which could be reached if the player drove for a certain amount of time. A similarly hazardous journey to a specific point on the horizon apparently leads to a large factory, churning out a horde of enemy tanks, while the game's UFO opponent, strangely innocuous, fostered several rumours, the most beguiling of which is a large mothership that descends from the heavens, attacking the player once a specific amount of flying saucers had been destroyed. Sadly, all these proved to be nothing more than wishful speculation, although that didn't stop some valiant arcade players setting out on a perilous journey in search of the legendary castle or factory. Talking of brave players, super-chief David Palmer sits atop the *Battlezone* Twin Galaxies high score table with an incredible ▶

APPLE II

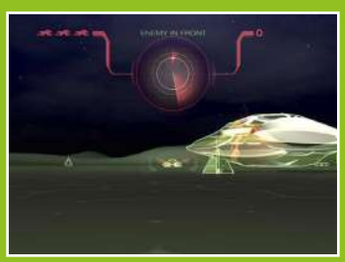
■ Another official Atarisoft port, unfortunately the Apple II struggles with replicating the pace of the arcade game, which, let's face it, wasn't that fast to begin with. In truth, it's a mind-numbing drudge, and the accompanying shrill notes don't endear it any further. Enemies really seem to struggle to shoot straight as well – we're not sure if that's a plus or minus!

LYNX (BATTLEZONE 2000)

■ It strangely took until 1995 for *Battlezone* to appear on Atari's own handheld Lynx, but it was worth the wait. Imitating the vector lines and gameplay, the controls are tight and responsive, and the sound effects are spot-on. Best of all, a secret game is also included, which features filled polygons, new tanks and 2,000 levels (see **Retro Gamer 154**).

XBOX 360

■ Developed by Stainless Games in 2008, this Xbox 360 update, released 28 years after the arcade game, has a classic game mode – unchanged from vintage *Battlezone* – and an upgraded mode, with multiplayer and a vastly sped-up pace. The distant moon and volcano also get a visual renovation, but the resolutely old-school gameplay will probably fail to excite modern gamers.



PS4

■ In 2016, *Battlezone* was brought into its natural home of VR by Rebellion, its new owner. Taking place on a procedurally generated map, *Battlezone VR* features supply tiles, upgrades and a finite destination. Additionally, a Classic Mode was added as free DLC, which lets you play a recreation of the original arcade hit and looks tremendous.

» [Arcade] The gun's sights helpfully change when a target is acquired.

» [Arcade] An explosion of 3D shapes is your reward for a successful hit.

The Battlezone Rebellion

WE CHAT TO REBELLION'S JASON KINGSLEY ABOUT ACQUIRING BATTLEZONE, AND WHAT THE FUTURE HOLDS FOR THE FRANCHISE

What are your earlist memories of encountering *Battlezone*?

■ I remember the stand-up cabinet, where you had to put your head against the fixed periscope. In the pandemic world, you wouldn't want to do that, of course, but back in those days, you didn't think about everybody else's sweaty heads that had been pressed up against the viewfinder. And I remember being amazed by the vector graphics, and how utterly useless I was at the game. But you weren't playing an abstract cartoon – you were drawn into the landscape, the glowing neon nature of things, it was quite remarkable.

What do you think made *Battlezone* so special?

■ It was so unique, properly unusual in its presentation and [had] a unique world to explore. I always felt that there must be more landscape to explore, and there were various rumours about how you could get to the volcano – which, of course, we played on in our virtual reality version of *Battlezone*.

Can you tell us about that and why you acquired the *Battlezone* IP?

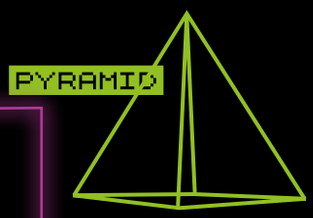
■ We have always liked heritage IP. So when we learned that it was available, we thought we had to at least try to get it as it was an interesting thing to build on. It's one of the ancestors of the computer games industry, and it was a first in so many ways and so bold an idea we thought it ought to be part of our catalogue. And it was good timing: the opportunity to be a launch title for PS VR came along not long after and we thought, 'That's perfect.' The original *Battlezone* was a VR game, except it wasn't on a headset and was limited by the technology of the time. But they did an incredible job. We had a few false starts [with the VR] and a few experiments that went wrong, but then everybody was learning about VR back then. It was a new place to make games in.

You must love the sequels too, considering the Rebellion *Redux* games?

■ Yes, absolutely. It was arguably quite an offshoot – it went in a different direction than a first-person shooter, but it was beloved by a generation of gamers. Some of them get confused when we talk about *Battlezone* – they forget that there is the arcade machine where it all came from.

What lies in the future for *Battlezone*?

■ We'll be doing more in due course, but when and how I don't know. The VR experience is still active, still drawing in players and viewers, so that's exciting. We haven't made any decisions, but we will be doing something more with it in the future, for sure.



▶ tank-busting total of 23 million points, a feat that has stood the test of time for over 25 years now. One *Battlezone* story that is actually true is the use of the game for American military purposes. Interested in expanding the training of its personnel in new and – more pertinently – more cost-effective ways, the US Army approached Atari about creating an adapted version of its game for training new recruits.

Top secret, and with Atari's Ed Rotberg reluctant to work on such a militaristic project, the result, the Bradley Trainer, was also often considered a myth during the Eighties. Today, however, thanks to an eagle-eyed collector, who discovered one of the few prototypes in a dumpster, we know that Atari did indeed produce the unit, expanding the gameplay with new enemies, weapons and a *Star Wars*-esque yoke replacing the famous twin sticks. As you might expect, given the parties involved, much of the actual detail behind the Bradley Trainer is lost, or being deliberately kept secret, but it remains a very memorable and intriguing chapter in the history of *Battlezone*.

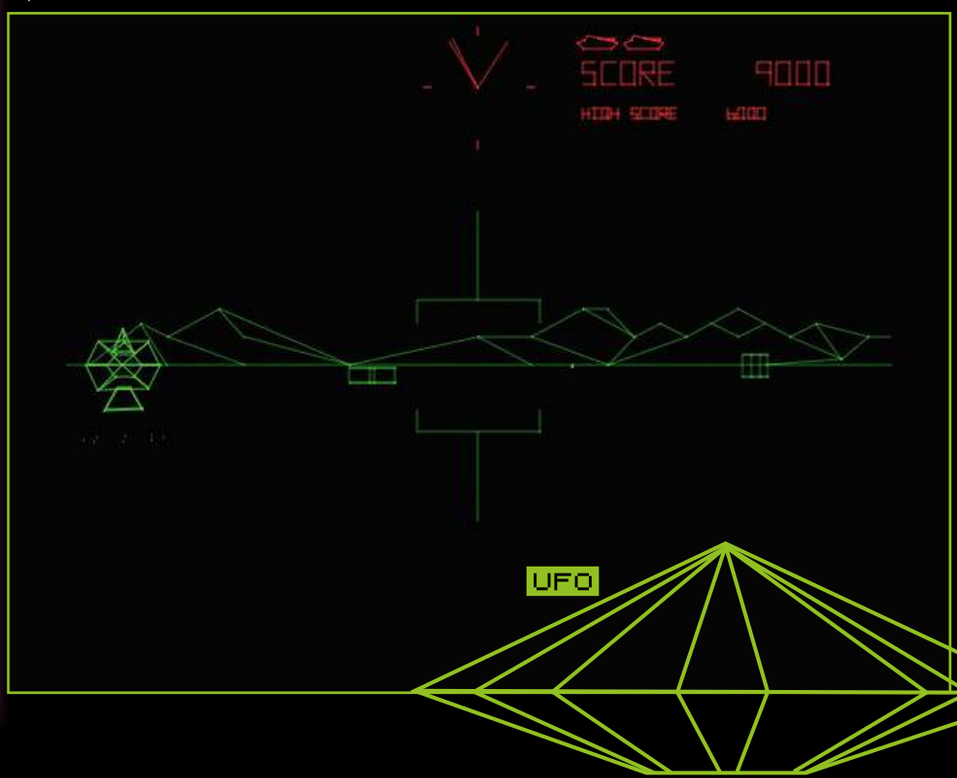
But back with the original game, and as an early progenitor of the arcades, unofficial clones, 'inspired' by *Battlezone*, were rife in the mid-Eighties. Possibly the most famous of these is *Stellar 7*, released for the Apple II and Commodore 64 in 1983, while the ZX Spectrum saw two notable tank battle games in Realtime's *3D Tank Duel* and Crystal Computing's *Rommel's Revenge*.

Furthermore, the Amstrad CPC got *Tank Busters*, based on *Rommel's Revenge*, coded by Simon Brattel and arguably the best of this unendorsed battalion of games. Unusually for the time, official conversions were also released by Atari, Atarisoft and Quicksilva (on the ZX Spectrum), and while an arcade sequel strangely never appeared, reboots and reimaginings have kept the brand alive, with Activision's 1998 strategy title and Paradigm's PSP game updating and transforming the concept for modern audiences. Then, in 2013, Rebellion Developments purchased the *Battlezone* franchise from Atari, bringing the original game to its natural home, virtual reality – for real.

The impact of the original arcade game, the marvellous visual treat of 40 years ago, remains its biggest mark on videogames. In a medium which routinely attempts to deliver us to another world or dimension, few experiences can match that which awaits you when you place your face to that viewfinder and find yourself transported to the glorious and glowing 3D realm of *Battlezone*. Good luck, commander. ✱

» [Arcade] This missile is ready to be shot out of the sky.

» [Arcade] There's no protection from this rapidly approaching missile – take it out, or it's curtains for our tank commander.



Q&A Susan Witts

WE TALK TO THE AUTHOR OF THE OFFICIAL ATARISOFT ZX SPECTRUM PORT OF BATTLEZONE

What did you think of *Battlezone*?
I saw a machine at a motorway service station in the spring of 1982. I don't think I'd even realised that something like that could exist. It was so different to everything else, first-person and 3D obviously, but I still remember seeing that haunting green stylised world. I thought, 'I wonder if I could write something like this?'

How did you come to work on the ZX Spectrum home port?
I'd been coding a fast line-drawing routine for *Battlezone* – or *Warzone* as I was calling it – on paper during the summer holidays of 1982. I was reasonably convinced that I was able to write the game, so I timidly approached the Quicksilva stand at the PCW show that September and said, 'I'm writing a *Battlezone* game for the Spectrum, would you sell it for me?' They seemed like a good choice as they had done other arcade games (*Meteor Attack* and *Space Intruders*) so it fitted with their direction at the time. I ended up in a long friendly chat with John Hollis. When my Spectrum burned a hole in its keyboard membrane, John kindly drove up to my parents' house to give me a replacement. Thanks, John!

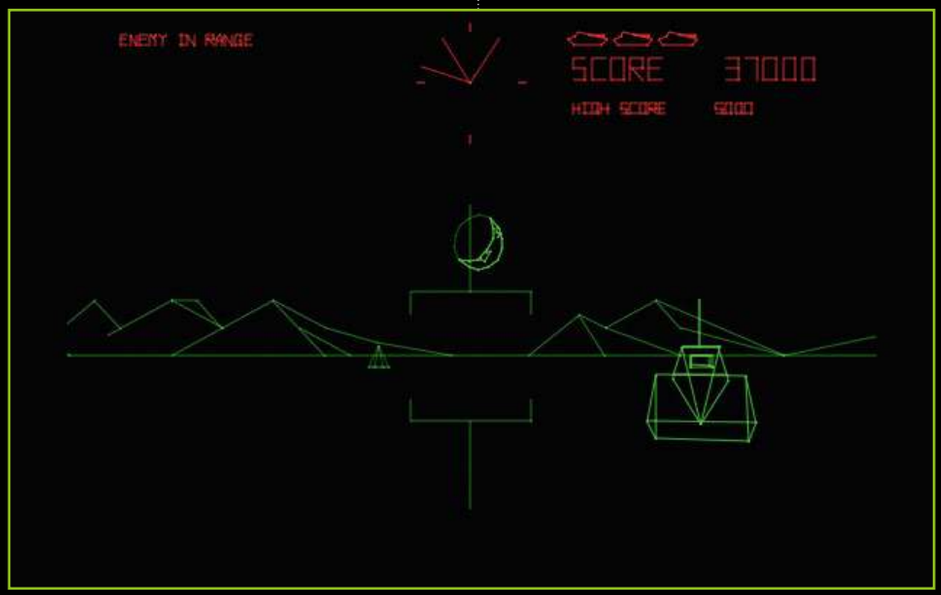
Did you encounter any issues converting the game to the Spectrum?
One interesting complication was that the conventional green and red colours didn't show up very well on Eighties television sets, especially monochrome ones. However, the Spectrum has a 'bright' setting which made the green okay, but I ended up changing the red to magenta, which showed up much better and looks fabulously lurid on modern screenshots.

Did you make many changes?
I literally forgot about doing the volcano and moon. When I saw a *Battlezone* machine quite near the end of development, I thought, 'Oh crap, there's a volcano. And a moon.' So I stuck in a volcano with some dots over it and hoped nobody would mind. I also found the original ending rather underwhelming, so I added a *James Bond*-style dripping blood effect to hammer home the point.

Did you think it a bit unusual that Quicksilva got an official licence?
Well, yes, but at some point in 1983, one of the other games houses was apparently approached by Atari regarding potential copyright infringement, and suddenly all the more blatant arcade ports became high-risk. So, initially, I redesigned the maps to turn the tanks into boats and *Warzone* became... *Gunboat Attack*! I even did a title screen, but by Christmas 1983, Quicksilva were still concerned, so they engaged with Atari to get the licence, which resulted in the 'approved by Atari, accept no substitutes' pitch. But it was a late arrival; at the beginning of the year, the clones had appeared and sapped our sales. The games market was changing and no one was doing arcade classics anymore. But the experience meant I got a lot out of my degree, along with first-hand involvement in what was a rather singular time in history.

Is there anything you'd have done differently?
Do you mean technically? After 35 years of software development? Absolutely everything! But I'm extremely glad I did do it: it was the very best thing I could have done at that age, at that time. And incidentally, I never took out all the *Gunboat* logic, so you might notice that the tanks motor around more than in the original!

» [Arcade] The game's designer, Ed Rotberg, sits atop the initial high score table.



» [Arcade] Super tanks are faster and nastier – but worth more points.

Peripheral Vision

Virtual Boy Controller

» **PLATFORM:** VIRTUAL BOY » **RELEASED:** 1996
» **COST:** £N/A (LAUNCH, BUNDLED WITH CONSOLE), £20+ (TODAY, UNBOXED)

As a noted oddity, the Virtual Boy also sports an odd controller. Nintendo opted for a perfectly symmetrical design for this peripheral, with two d-pads, four face buttons and two rear buttons. While this allowed for left-handed players to adopt reversed controls where possible, which was a welcome feature, the bigger reason for including a second d-pad was to give players proper control over objects in 3D space. Of course, with the Virtual Boy's library featuring so few games, this functionality was rarely exploited in practice.

While a joypad is a crucial part of any videogame console, the Virtual Boy cannot function without its controller, as power is delivered through the device via one of two removable interfaces. The battery pack was supplied as the default option and adds a lot of weight to the controller due to the six AA batteries required, so you may prefer to use the AC Adapter Tap. This was sold separately and allowed players to use a Super Famicom or US SNES power supply, depending on the region. Most used Virtual Boy controllers today are sold without any power delivery interface, and go from £20, but complete ones cost rather more, as you'd expect. ✱

ESSENTIAL GAME
TELEROBOXER

This robot boxing game is one of the better Virtual Boy titles out there, with some impressive multi-sprite enemies and gameplay that's a little shallow but good fun. It also really benefits from the unusual symmetrical layout of the controller. When used alone, the two d-pads handle defensive actions, allowing you to raise and adjust your guard for each fist independently, as well as dodging to either side. Once you're ready to go on the attack, the two buttons on the rear of the controller work in conjunction with the d-pads to deliver a range of punches in an intuitive fashion.

Virtual Boy Controller fact

■ Since every console was packaged with a single controller and couldn't support more, Virtual Boy pads were never sold separately at retail. As a result, no retail boxed versions exist.

SYSTEM SUPPLIED BY **EVAN AMOS**

THE MAKING OF ZX INTERFACE 1+2

Although it was launched in April 1982, Spectrum development didn't stop for Sinclair, with multiple hardware revisions and two official expansion modules following. Sinclair's Martin Brennan and John Mathieson reveal the inside story behind Interface 1 & 2

Words by Martyn Carroll

> "SINCLAIR WAS A TINY COMPANY THAT RODE AN EXPLOSIVE WAVE. MANUFACTURING A RADICAL NEW STORAGE MEDIUM WAS AUDACIOUS"
> MARTIN BRENNAN

When Martin Brennan joined Sinclair Research in 1982 as a computer engineer, his first question on his first day echoed what fellow Spectrum owners had been asking since the computer's launch: "Can I see the Microdrive?"

The Microdrive was Sinclair's proprietary storage solution – a tape loop system that could hold 85KB of data on a compact cartridge with a transfer rate of 15KB per second. Not only were Microdrive units much smaller than floppy disk drives like the Commodore 1541 and the Atari 810, they were also a fraction of the cost, retailing at just £50.

"You have to remember that floppy disks were still pretty exotic at the time," highlights Martin. "The drives were often made of cast aluminium and had a mains-powered motor. I had bought a Spectrum earlier in 1982 and one of the biggest appeals was the promised Microdrive. I was developing software and still using cassettes to store programs, so the Microdrive data rate, capacity and physical size was a dream."

It was a dream that would prove distant for the Spectrum's early adopters. The Microdrive was announced when the Spectrum launched in April 1982, alongside Interface 1, the device that would connect up to eight Microdrives to a single Spectrum. Interface 1 also added connectivity options that were aimed at business and education users – an industry-standard RS232 port for connecting printers and other devices, plus a 'ZX Net' connector for creating a LAN of up to 64 Spectrums. *Sixty four*!

» Martin Brennan was responsible for Interface 1's digital electronics and software, including the networking code.

» Interface 1 was a fairly ugly plastic slab that sat beneath the Spectrum. It cost £50, or £30 when purchased with a Microdrive.

Many reviewers commented that the Spectrum and Interface 1/Microdrive combo would result in an exceptionally affordable and capable system. Microdrive commands like 'Move' and 'Format' were included on the Spectrum's busy keyboard, yet there was no sign of the device itself (and it was soon discovered that the commands were not even present in the Spectrum's ROM). So what was going on? "Richard Altwasser and Steve Vickers, who were responsible for the Spectrum's hardware and software, departed Sinclair to launch the Jupiter Ace [computer], and this created a void in the Microdrive development," reveals Martin.

In hindsight, he may have regretted sticking his head above the parapet on his first day. "By lunchtime my job was the Microdrive!" he laughs. "There were a couple of handmade Microdrive cartridges and a bare, unenclosed drive, and [design engineer] Ben Cheese was working on some analogue electronics, but that appeared to be it. I was tasked with designing the digital electronics and writing the software."

One of the fundamental problems the team had to solve was how to add in the Microdrive and ZX Net commands that had been omitted from the Spectrum ROM in the rush to get the computer out the door. Martin explains: "[R&D developer] Jim Westwood described the idea of a shadow ROM to me on that first day. Interface 1 included its own ROM which could be switched in when a certain instruction was executed. I thought it was a cool idea. Once they realised they could use hardware to extend the software, they didn't need to delay the Spectrum ROM by trying to anticipate the future."

The Microdrive and Interface 1 eventually launched in September 1983, 16 months after they were announced. By this time a huge amount of cassette software had been released for the Spectrum, so it was expected that developers would take advantage of the access speed and storage space afforded

» John Mathieson joined Sinclair in December 1981, and after helping launch the Spectrum, he focused on Interface 2.

» You could slot Interface 2 straight into the Spectrum's expansion port, or daisy-chain it to Interface 1.

by cartridges. Sinclair certainly seemed to think so. "The scope is enormous," ran one of its Microdrive ads. "Stock control, financial modelling, complex accounting – even a life-long adventure game." For most Spectrum owners, one of those things was more appealing that the others. Adventure columnist Quentin Heath enthused about the device's gaming potential in *Sinclair User* magazine: "The adventure game market can benefit from the Microdrive. Games will become more complex... it will be possible to create a graphic adventure which will make *The Hobbit* seem crude. Every location in a game could be depicted with screens." *Crash*'s Franco Frey also predicted big things for gaming, musing about future 'epicventures'.

At the time, Martin felt the same. "The Microdrive was a dream for loading programs, so we thought it would be great for games." Sadly, no games were designed specifically for the format, and only one title of note was actually released on cartridge and that was *Ant Attack*. Publishers clearly weren't rushing to support a format that required punters to purchase extra hardware. There were also legitimate concerns about the reliability of the system and the fallibility of cartridges. Publisher Softek, who released The Artist and The Writer on cartridge, reported that 75% of the cartridges they demoed at the 1985 PCW Show failed within four days. It appeared that spinning a delicate tape at high speed was a risky business.

Surprisingly, it was the networking features that had a bigger impact on gaming – even though only a handful of titles offered multiplayer support. "The multiplayer potential was very apparent to us," reveals Martin. "I remember one afternoon we got the network interface going and hooked up a number of Spectrums around the office. Someone had written a program that wormed its way around the lab. It was a bit geeky."

Despite the reliability issues, Martin believes that the Microdrive achieved its main aim as a low-cost storage solution. "I think the Microdrive was a fantastic idea. It was an incredibly simple idea – a continuous loop of tape, very few moving parts, using cheap cassette recording heads. The capacity and access time were just right. But technology doesn't stand still, so there was only a brief window of opportunity. I think if the Microdrive had been available at the time of the Spectrum's launch, then it would have been much bigger and could have been the storage standard for a few years. You have to remember that Sinclair was a tiny company that rode an explosive wave. I think inventing, creating and manufacturing a radical new storage medium was audacious and a hell of an achievement."

Interface 1 wasn't designed with gaming in mind – that role fell to Interface 2. Unusually for Sinclair, the second module was a direct response to the Spectrum's popularity as a games machine. It added twin joystick ports and a ROM cartridge slot, and cost £20.

Interface 2 was developed by John Mathieson. "I was the most junior engineer," he says, "so I got left with all the jobs nobody else wanted to do supporting the Spectrum in production. I led the work on making the Spectrum manufacturable, so all the PCB revisions from issue two forwards. They gave me Interface 2 to design as part of that work. Clive liked the idea of allowing almost anything from the expansion connector." ▶

GAMING ON INTERFACE 1

A QUARTET OF TITLES OFFERED NETWORK PLAY

HUNTER KILLER

1984, PROTEK

Originally published as a listing in *Your Computer* magazine, where custom hardware was used to link two Spectrums, this commercial version makes use of Interface 1 instead. In the versus game, two sub commanders go head-to-head in an absorbing duel.

DELTA WING

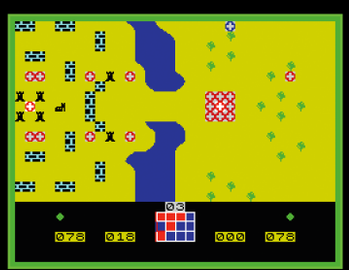
1984, CREATIVE SPARKS

Top Gun and *Ace 2* delivered air-to-air combat for two players, but both pilots were crammed onto the same screen. This earlier flight sim uses ZX Net so that each player has their own display in which to pursue, target and shoot down their rival.

OVERLORDS

1985, MC LOTHLORIEN

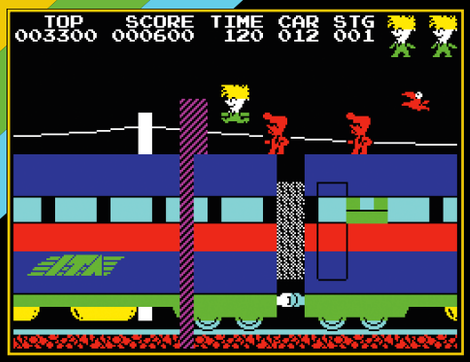
This real-time strategy game is perhaps the most Interface-1-friendly title ever released. Not only can you battle against a rival overlord over ZX Net, but the publisher also grants owners the option to back up the game to Microdrive for faster access.



TT RACER

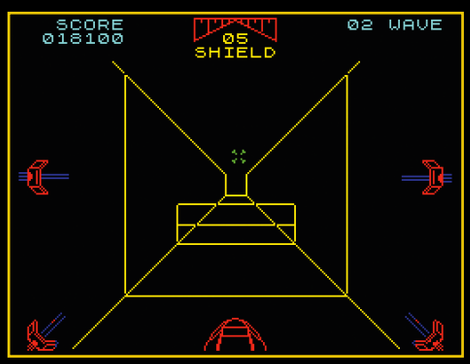
1986, DIGITAL INTEGRATION

Easily the most ambitious title to offer network play, this bike-racing sim allows up to eight flesh-and-blood players to burn rubber against one another. Whether anyone has ever managed to achieve this practically is debatable, but it would surely be a blast.



» [ZX Spectrum] *Stop The Express* is one of several Hudson Soft games that would have been a great fit for the cartridge format.

> "CLIVE [SINCLAIR] LIKED THE IDEA OF ALLOWING ALMOST ANYTHING FROM THE EXPANSION CONNECTOR"
> JOHN MATHEISON

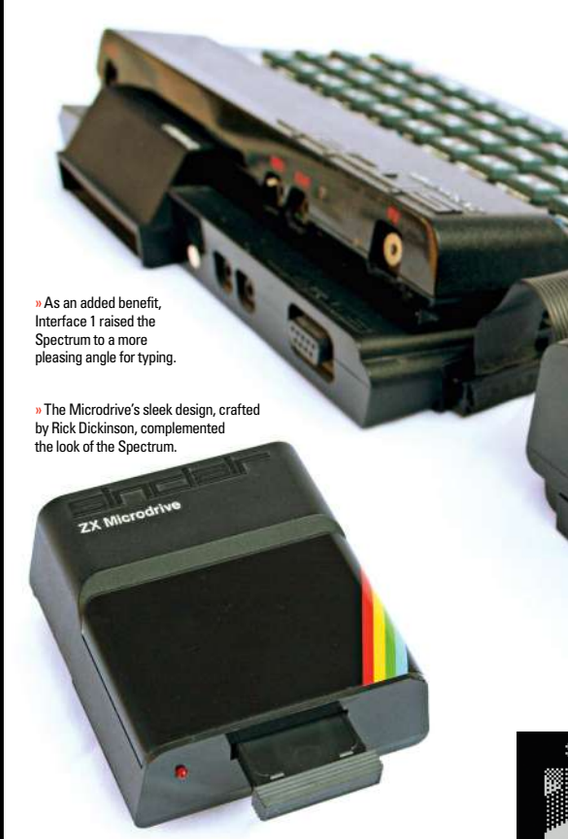


» [ZX Spectrum] Predating the Domark licence by three years, a version of the *Star Wars* coin-op was developed for Interface 2.

▶ For the joystick ports, Sinclair used its own system rather than adopt the established Kempston or Cursor standards. "I don't recall why we did that," admits John. "I suspect it was a cost-saving measure, as mapping all the keys to one row of the keyboard would make the decoder chip simple, and that would be a very Sinclair way of doing it."

More interesting was the ROM cartridge slot. The Microdrive reduced load times from minutes to seconds, yet carts loaded instantly. When Interface 2 launched in September 1983, three old Psion games were made available on cart: *Backgammon*, *Planetoids* and *Space Raiders*. Seven more would follow before the year was out, but then the releases stopped and the format effectively died. "It was a cost issue," comments John, referring to the £15 price tag of the carts, which was roughly three times more than the cassette versions. "There was an expectation that the cartridges themselves would fall more in price than they did. Cassettes remained much cheaper, which made more business sense. Cost was everything, even if the loading experience was much worse."

One major limitation of the format was that carts were limited to 16KB in size, when 48KB games had become the norm. This was due to the simple nature of the cartridge format, which offered no paging mechanism and simply replaced the Spectrum's 16KB ROM in memory. "When we started the project, 16KB seemed to be enough to cover the existing games, then the market veered to 48KB-only games. Paging would certainly have



» As an added benefit, Interface 1 raised the Spectrum to a more pleasing angle for typing.

» The Microdrive's sleek design, crafted by Rick Dickinson, complemented the look of the Spectrum.

» [ZX Spectrum] Softek's The Writer was one of a very small number of programs that was released on Microdrive.

GAMING ON INTERFACE 2

SPACE RAIDERS

■ One of the better *Space Invaders* clones to appear on the Spectrum. The graphics are large and colourful, and the gameplay accurately mimics the arcade original – which essentially means wave after wave of mind-numbing invaders. Nice cover art, though.

PLANETOIDS

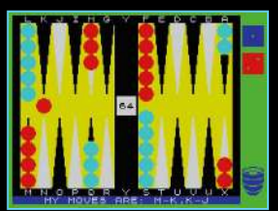
■ A simple *Asteroids* clone with poor graphics and a highly suspect grasp of gravitational physics. As an added insult, the original cassette version included a second game called *Missile* which wasn't included on the cart release. You weren't missing much, but still.

CHESS

■ As you'd expect, this was a credible machine-coded version of the board game. Developer Mikro-Gen had self-published an update with enhanced features by the time this was released, but here we have the original no-frills tape version slapped on a cartridge.

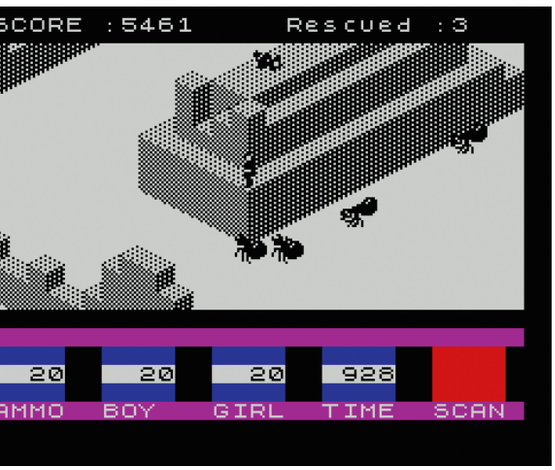
BACKGAMMON

■ We're guessing that Interface 2 owners weren't rushing to get their hands on this hot cart, especially as there were already many versions of the game available on tape or as type-ins. But if Backgammon was your thing, this was one of the more polished versions.



HUNGRY HORACE

■ The leading star of the Speccy's early years was everybody's favourite blue blob Horace. In this, his first adventure, you have to munch the flowers in the park while avoiding the angry rangers. Fluid graphics and gameplay lift this above other maze games of the era.



» [ZX Spectrum] Quicksilva's *Ant Attack* was included as part of a Sinclair Microdrive bundle that also included three utilities.

been possible, but more expensive, so wasn't the sort of thing we would have thrown in. The Sinclair way was to keep it cheap."

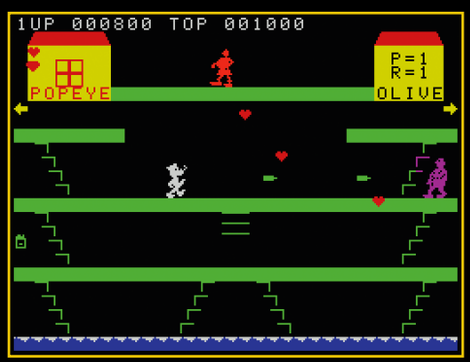
It's a moot point now, but the cartridge release of *Chess* points to a missed opportunity. On cassette, this was a 48KB release, yet on cart it worked on 16KB Spectrums. The reason was because 7KB of the 16KB RAM was always occupied by the screen memory, which meant that games were actually limited to 9KB in size. ROM carts could use the full 16KB, which is why *Chess* (an 11KB game) was fine. Despite this, none of the other cart releases made use of the extra 7KB. New levels, new graphics could have been added to enhance the cart versions over their cassette counterparts. The disappointment didn't stop there, as Parker Brothers was planning to release seven exclusive games on ROM cart in 1984, but the firm quit gaming and they were all canned (although two /of them – *Panama Joe* and *Return Of The Jedi: Death Star Battle* – were released on tape by Sinclair, and the remaining five have since surfaced).

The tepid approach to the ROM cart format adds weight to the claim that Sir Clive Sinclair felt gaming was trivial. "That's entirely a fair comment," says John. "We got no traction with Clive trying to persuade him we should build a follow up to the Spectrum for better gaming. Loki was really just a skunkworks idea without Clive's blessing." You can read more about John and the Loki project in **RG201**. As for the add-ons, Interface 2's expansion port only accepted the ZX Printer, which effectively ruled out an Interface 3. "There were never another interface planned," confirms John.

"There were concerns about how far the bus traces could extend, and this solution made the board simpler – and cheaper. Are you seeing a theme here? But looking back, I don't think I would have changed anything. Interface 2 did what it was supposed to do, was reliable and was inexpensive."

There was no Interface 3 from Sinclair, but an intriguing new device with that name is currently in development for both the Spectrum and the Spectrum Next. Designed by Charles Ingley of vRetro, it's currently being prototyped but it will include hardware emulation for up to eight Microdrives and floppy disk support, plus other perks. It should be available in early 2021 and it'll be fascinating to see how it continues the Sinclair tradition of enhancing the hardware – and expanding our horizons. ★

Special thanks to Colin Woodcock for providing the hardware images.



» [ZX Spectrum] Coin-op conversions of Nintendo's *Popeye* and Gottlieb's *Q*bert* were two more ROM cart releases that were scrapped.

WERE THE TEN ROM CART RELEASES ANY COP?

HORACE AND THE SPIDERS

■ Psion skipped *Horace Goes Skiing*, the second and best of the series, selecting to release this uneven third game on cart instead. This time around, Horace has to avoid man-sized spiders before trapping them in their own webs. The multi-part gameplay keeps things interesting.

JETPAC

■ Help Jetman refuel his spaceship while avoiding alien critters. Ultimate's debut release is a genuine timeless classic, featuring brilliantly colourful graphics and bags of challenge. If you only had the cash for one cart game then this was without doubt the one to get.

PSSST

■ Robbie The Robot has to protect his prize plants from an invasion of nasty bugs. *Pssst* is not as immediate or as memorable as *Jetpac*, although the introduction of different weapons creates a more measured challenge. Another arcade hit from the talented lot at Ultimate.

TRANZ-AM

■ A scrolling desert landscape replaces the single-screen antics of Ultimate's first two games. The aim is to razz around the US in your 'Red Racer', collecting trophies while avoiding 'Deadly Black Turbos'. It's often overlooked these days, but it really shouldn't be.

COOKIE

■ The last cartridge game to be released, and generally regarded as the most collectable. Charlie The Chef must fire ingredients into the mixing bowl while chucking rubbish into the bin. Fast and frantic, this is a fun arcade game that suits the cartridge format perfectly.

CLASSIC MOMENTS

Axelay

» **PLATFORM:** SNES » **RELEASED:** 1992 » **DEVELOPER:** KONAMI

You knew level five of *Axelay* was going to be incredible. After all, you'd pored over all the images that had been shown of the stage in various previews across the many magazines you bought, and you had eagerly devoured all the gushing reviews that praised the technical excellence of Konami's newest shoot-'em-up. You had even barrelled through the first four stages of the game yourself, so you knew that *Axelay* was a game of remarkable graphical quality, with a soundtrack to match. And yet, despite knowing all this, the fiery environment of level five, with its gargantuan lava worms, fire dragons that looked like they had escaped from *Salamander*, and gouts of flame that threatened to turn your craft into a fiery conflagration, still managed to blow you away. It was quite simply exceptional. And then, of course, there was the pant-wetting encounter with Wayler, the utterly imposing fiery boss that awaited you at the stage's end. As tough to defeat as it was formidable to look at, this magnificent boss was the perfect way to end its jaw-dropping stage. *

BIO

If Konami's shooter doesn't reside in your collection please consider adding it immediately. It's perhaps the best shoot-'em-up to have been released on the SNES, and boasts imaginative bosses, outrageous effects and a robust weapon system to grapple with. It was one of many titles released by Konami on the SNES that highlighted the developer's mastery of Nintendo's 16-bit console and it has not aged at all. Despite promising a sequel, and the general acclaim that *Axelay* received, no follow-up ever arrived, and the game's SNES exclusivity has meant prices continue to climb. Pick it up though, as you certainly won't be disappointed.

MORE CLASSIC AXELAY MOMENTS

"Your Move, Creep"

Aside from featuring a blisteringly good tune, *Axelay*'s second stage also houses one of the game's best bosses. After blasting through deep space, you enter a research facility where you have to contend with moving doors, numerous gun emplacements and a host of moving platforms. It culminates with a tremendous face-off against a gigantic ED-209-inspired mech, which promises to obliterate you with a huge plasma beam.

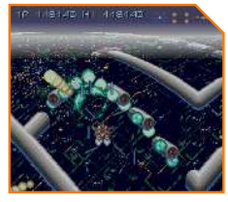
Musical Madness

We've gushed about it already, but *Axelay*'s soundtrack really does deserve your full attention. Composed by Taro Kudo, who first cut his teeth on *Super Castlevania IV*, it's a wonderfully diverse soundtrack that does play to typical shmup conventions, but isn't afraid to throw in some real foot-thumping tunes that really complement the frenetic on-screen action and dynamic spot effects. We'd love a vinyl release.

Packing A Punch

Choice is always good, particularly when you're up against hordes of enemy craft, meaning *Axelay*'s ability to let you arm your ship is a sound one. Initially, you're stuck with a predetermined set of weapons but as you progress through each stage, you'll get to choose from more and more, meaning you can tackle each level to suit your playing style.

Tubular Hell

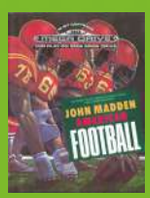


Perspective plays an important part of *Axelay* and it's highlighted beautifully on the third level. You start off flying over a moon-like surface, full of pits and craters, but that soon drops away to reveal a twinkling cityscape far below you. It's impossible to admire for too long, though, as you have to deal with numerous enemies while weaving your way through a maze-like construction of futuristic pipes and enemy flak.

THE MAKING OF JOHN MADDEN FOOTBALL

Alongside Sonic, Madden 1990 became the Mega Drive's must-have game, drawing a whole generation to Sega's console and ushering in the era of the blockbuster game franchise. The creators of this killer app talk to us about how it changed sports gaming as we know it

WORDS BY DAVID JESUDASON



IN THE KNOW

- **PUBLISHER:** ELECTRONIC ARTS
- **DEVELOPER:** ELECTRONIC ARTS
- **RELEASED:** 1990
- **PLATFORM:** MEGA DRIVE, VARIOUS
- **GENRE:** SPORTS

The story begins on an Amtrak train that departed from Chicago in 1984. The NFL commentator John Madden is being told of a computer game that would bear his name and be similar to *Strat-O-Matic*, a pen-and-paper stats board game created in the Sixties. Electronic Arts' founder Trip Hawkins loved the baseball version of this dice-based niche pursuit as a kid – he still plays it today with childhood friends – and his enthusiasm for adapting it to the virtual football field wins over the prolific commentator, who has no real knowledge of computers. Trip steps off the train with EA developers Joe Ybarra and Robin Antonick, tasking the latter with creating the game that was to be *John Madden Football* (1988) on Apple II, PC, and Commodores 64 and 128.

Trip worked with Robin on the game and it was much delayed to the point where it became known as 'Trip's Folly'. However when it eventually released, the first *Madden* of the series was a relative success, and it featured numerous plays to choose from, taken from the Oakland Raiders training manual (playbook) that was handed to Trip on that Amtrak train ride. The game later became the subject of a legal tussle between EA and Robin Antonick, with the latter unsuccessfully claiming it was influential on later *Madden* incarnations. In reality, *Madden 88* was a blocky affair limited by the technology of the time, but it showed that a stats-based football game was possible if the right team dedicated to its creation could be formed.

"There were sports games before Electronic Arts," says former EA chief creative director, Richard Hilleman, who designed *John Madden Football* (1990). "But almost all of them were videogames that happened to be sports games. The game mechanics didn't have much to do with sports, and if you knew something about the sport, it didn't make you any better at the videogame – often it made you worse. Those were the things that Trip really rebelled against."

Successfully recreating sports mechanics was something Richard had recent experience of. He had just finished the superb *Indianapolis 500: The Simulation* for DOS PCs

DEVELOPER HIGHLIGHTS

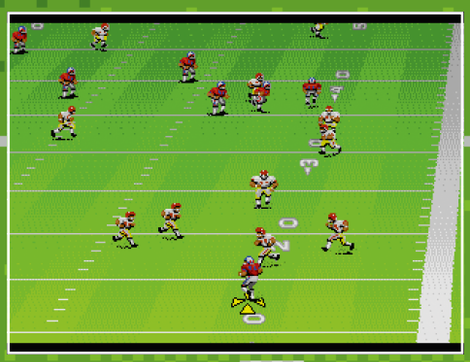
JOHN MADDEN FOOTBALL 92
SYSTEM: SNES, MEGA DRIVE
YEAR: 1991

EA HOCKEY/ NHL HOCKEY (PICTURED)
SYSTEM: MEGA DRIVE
YEAR: 1991

FIFA INTERNATIONAL SOCCER
SYSTEM: MEGA DRIVE, VARIOUS
YEAR: 1993

» [C64] The Commodore 64 version did not feature an NFL licence, but you could customise features, such as the weather.

» [C64] *Madden* was the first football title to be inspired by the *Strat-O-Matic* board game, and was known at one stage as 'Trip's Folly'.



» [Mega Drive] Rob Hubbard's sound work was highly valued by Richard, who thought the more you invested in a game, the better it was.

» [Mega Drive] One of the successes of the NFL franchise was its regularity and reliability, with *Madden 90* and its subsequent sequels shipping on time.

"MY ONE GREAT CONTRIBUTION TO THAT GAME WAS THAT WE'RE NOT GOING TO DO SOMETHING CUTE – WE GOT THREE BUTTONS, WE'RE USING THREE BUTTONS"
RICHARD HILLEMAN

which was the first successful attempt at an accurate driving game that offered the thrills of the arcade from multiple angles and replays. Richard was now tasked with making a football game for the Mega Drive that could offer the same exhilarating experience as *Indy 500* but on grass instead of tarmac. It wasn't an impossible task, as was demonstrated by a PC game created by Park Place Productions in 1989 called *ABC Monday Night Football*.

Although flawed in the way it actioned out plays in a sometimes glitchy way, *MNF* was relatively fast, had offensive strategies to choose from and was a huge visual improvement on EA's 1988 version of *Madden*. So Park Place's Troy Lyndon, Michael Knox and Scott Orr (who also created *Star Bowl Football* on the Atari 400/800), and Jim Simmons (this was to be his first published game) were all drafted in by Richard. Their work on the 1990 iteration of *Madden*, which would be released on the Mega Drive first, then a year later on SNES and finally on the Amiga in 1992, was to become legendary. EA was hoping at best to sell 75,000 copies but sales were five times this figure.

"I took *Monday Night Football*, and said, 'Well, if I just ship that game, as well as I know how to ship it, it's going to be 45% better, that'd be okay," says Richard humbly. "So that was my original goal: take *Monday Night Football* and just finish it. What we ended up doing was making quite a different game."

Where the previous *Madden* was a simulation for diehard fans, the sequel featured typical console fun. The quarterback would fly out of the pocket (the backfield area) and the game allowed you to pick a pass by making split-second decisions, thanks to the novel idea of having three windows at the top of the screen where you could view the receivers (catchers). The Mega Drive was perfectly suited for this game-changer as it had three buttons which enabled you to quickly choose a receiver, and if the pass was caught, you immediately controlled the ball carrier. "My one great contribution to that game," adds Richard, "was that we're not going to do something cute – we got three buttons, we're using three buttons."

Richard may have been keen to utilise the Mega Drive's control pad but the idea of having receiver windows was Scott Orr's, who loved sports games on the early Atari and Mattel ▶

THE KNOX EFFECT

THE AFRICAN AMERICAN TRAILBLAZER WHO CREATED MADDEN

Michael Knox was an inspiring African American figure who, maybe unwittingly, paved the way for other people of colour to make a career out of creating videogames. Before *Madden*, he was an unassuming figure and, like many in the industry, a self-proclaimed nerd who loved sci-fi shows such as *Star Trek*. But after the game's incredible reception he knew he was also a rarity: a black man in the US who had a voice that could not be ignored. For Richard Hilleman, Michael deserves being compared with Jackie Robinson, the first African American to play in Major League Baseball.

"After 1991, he did more public speaking," says Richard, who has a long history of investing in diversity, including hiring Gordon Bellamy as an intern. "Suddenly, it meant people who were trying to figure out if they want to be in the industry could suddenly see somebody who looked like them and they could now imagine being in the business. That's always such an important step: 'Can I see somebody who looks like me that makes it so I could imagine being there?' We always underestimate what I call that 'Jackie Robinson moment', which is, 'When can I see myself there?' Michael was a part of that moment. That's important."

As well as *Madden*, Michael worked on *EA Hockey* and *Muhammad Ali Heavyweight Boxing* on the Mega Drive, establishing himself as one of the most influential black developers in the early Nineties. "We can never be in a position where we think we know it all. The second we think we know it all in a changing environment, we're in trouble," he told a news broadcaster in 1993.

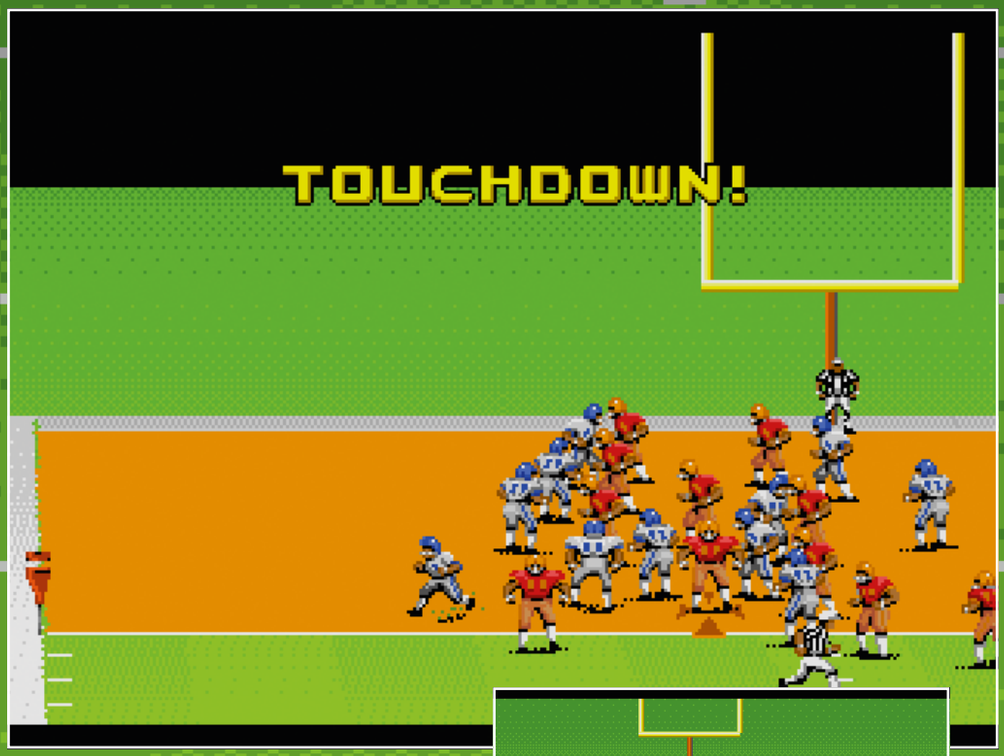
Michael's legacy has never truly been appreciated, as he died 11 years ago aged just 48, but his input in the *Madden* series helped it appeal to black Americans and ensured that videogames in general had a diverse audience.

THE MADDEN EFFECT

A BRIEF LOOK AT JOHN MADDEN HIMSELF

John Madden has given his name to the NFL videogame series ever since EA founder Trip Hawkins approached the legendary commentator in the Eighties. But this was no superficial tie-in, with the software firm drafting in the former Oakland Raiders coach to make the games as realistic as possible and to help with the player rankings from *John Madden Football 92*. The reason John was able to spend so much hands-on time was because he was scared of flying, making him available to speak to the developers on his regular train rides around the US when travelling to commentate on ball games. The first meeting took place on an Amtrak train in 1984 with *Madden 1988* game producers Joe Ybarra, Robin Antonick and Trip Hawkins discussing how the first game would take shape. "They had John's relatively undivided attention," says Richard Hilleman. "And he wasn't distracted by other things so it was good for the project. The only artefact that came out of that meeting that I saw was the Oakland Raiders playbook."

After the smash-hit Mega Drive version, John Madden, and his two sons Joe and Mike, were always involved with the game's development, helping with changes to the series. In fact, John was assisting with the games' improvements right into his eighties and well after he retired from commentary, with developers meeting him at least once a year to get his feedback on the latest additions to the franchise. The latest game, *Madden 21*, might not feature his commentary but John's DNA runs throughout it.



» [Mega Drive] Scoring touchdowns became easier when you mastered which teams had a better running or passing game.

» [Mega Drive] John Madden wasn't tied to the game until very late on in development, so Scott had to quickly incorporate him into it.

Intellivision consoles, and followed the San Francisco 49ers and Giants, despite growing up in southern California.

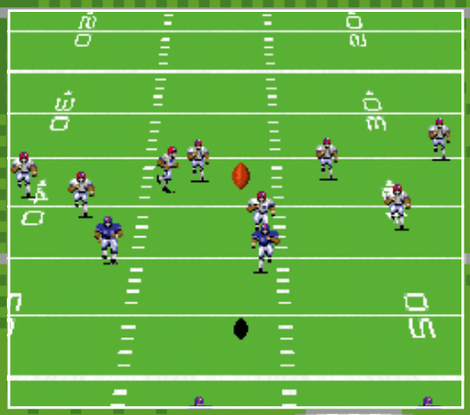
"The passing windows idea came to me from watching football on TV," he says, "which would isolate receivers in windows for replays. The Mega Drive controller's three buttons were perfect to implement that in the game, and it was a very popular feature. We dropped the windows a few years later as Jim was able to lower the perspective so even receivers going deep stayed mostly in view."

It was three buttons for defence too, which meant that players could burst forward and try to sack the quarterback, which was a source of much jubilation when contact was made, especially in two-player mode. Unlike in other sports games, it was just as much fun to be attacking or defending a goal line, and players had to give each aspect of the game equal attention. This smoothness both in offense and defence meant that the game was a faster version of televised games – especially as the CPU cuts out the stop-start nature of NFL – and this became one of its key attractions.

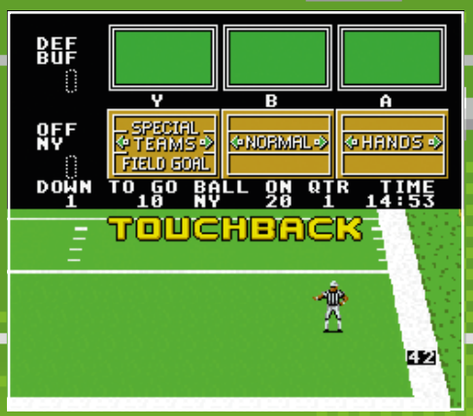
"The balance was a major reason why the game was so successful compared to its competitors," reveals Scott. "It also reflected John Madden's philosophy that every play was a series of one-on-one confrontations between 22 players. Having the on-field players rated on a variety of skills was key in making that work, as well as the production team spending hundreds of hours fine-tuning that balance."

The game's 20 frames per second framerate really pushed the Mega Drive to its limits and showed how visionary the development team was, as the devs initially wanted it to be even faster at 30fps. It meant the game was enjoyable in one-player mode vs CPU but extra special in two-player mode – this was the first sports title to really come to life in social occasions, and probably is one of the greatest, alongside *Micro Machines*, for playing with your mates. Trip had wanted a rebellion against unrealistic simulation but Richard was part of the rebellion against the rebellion: he wanted the game to be fun at all times and it really showed. "We wanted it to feel like a great arcade game," he says. "It had to feel as good as *Robotron*, as *Defender*, as *Mario*. Considering *Mario* was 8-bit, that was easy. Framerate was king. The minute [the designers] break framerate, stuff stops – meaning if that breaks the framerate, you don't do it. That was my rule.

» [Mega Drive] *Madden 90*'s passing game was eye-opening, with a quarterback able to choose from three receivers.



» [SNES] Super Nintendo owners had to wait nearly a year for their version, which looked great but suffered from jerky animation.



» [SNES] Another SNES issue was the camera moving really slowly, which created all sorts of issues, such as returning kick-offs.

» [Mega Drive] In defence you couldn't just rush forward past the line of scrimmage to sack a QB.

"So that was often how that process went. It was trading off simulation for an alternative approach on little tiny details. And so we were very good at deciding what we weren't going to do. We were going to be devoted to that feel first and I would say that Jim, in particular, carried that baton well."

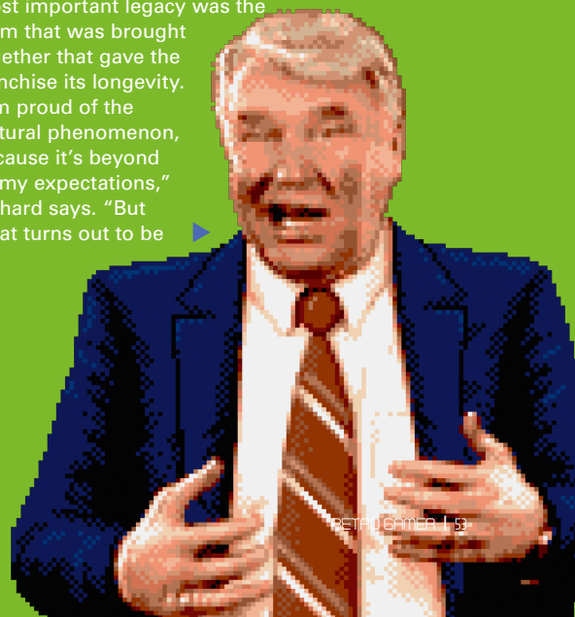
The top-down 'horizon' perspective the game used was also revolutionary. Other football and sports games may have used this alternative to left-to-right play but *Madden 90* perfected smooth scrolling, giving gamers a rich sense of how big the field was. This meant that returning kicks, running-back breakaways or long passes could be breathtaking when successfully completed, with the depth of the pitch giving the player the illusion of real-life glory. "The perspective with the scrolling horizon was a major breakthrough for football games," says Scott. "It was made easy by the Mega Drive's dedicated graphics hardware. There had been other vertical scrolling football games before it, including *Monday Night Football,* but none with the distinctive scrolling horizon like *Madden*."

In the end, the compromise between simulation and gameplay didn't mean the game tipped towards superficial arcade fun. There may have been unreal touches, such as rock music (composed by Rob Hubbard) playing when you scored a touchdown, but gamers were now introduced to a feature that proved to be the winning formula of the whole *Madden* series: player ratings. Nowadays, each *Madden* release comes with so much news coverage about how each athlete in the game is ranked that it seems entirely a media-driven gimmick. However, in the early Nineties no one knew that ranking of real-world players would be a big deal at all, until Richard and cofounder of EA Sports, Michael Brook, did them. In the end, *Madden 90*'s audience was so gigantic that some pro players complained about how they were represented in the game, and John Madden himself was harangued, vowing to take over this part of the design, which he did with the follow-ups.

"I had tried to get John to rate the players," says Richard. "We knew we were onto something when we heard back from John after he had gone to New York and that one of the wide receivers there had challenged him to a foot race to prove to him that he wasn't a four. John came back and told us he was going to be doing the ratings from now on. That was perfect. It's what we always wanted."

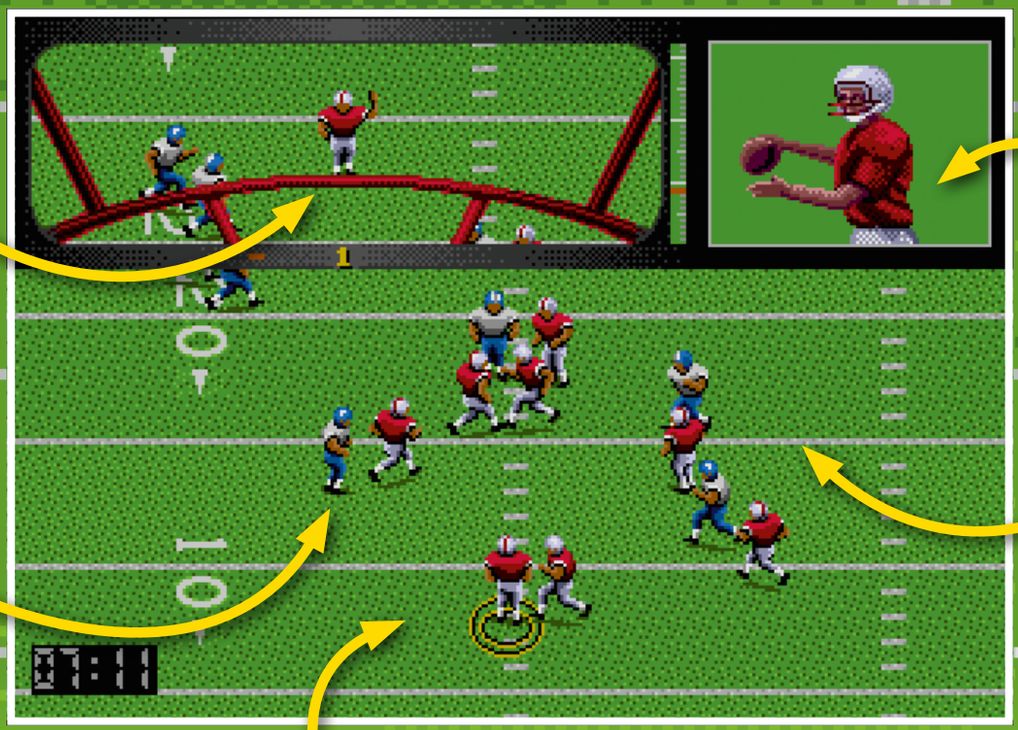
The player ratings allowed you to feel like you were your favourite NFL player and find the team that suited your skills as a gamer. It's also one of the many ways that *Madden* impacted on popular culture with TV coverage of the NFL, Richard claims, copying some of the game graphics, such as the yellow line used to show yards needed and the smaller scoreboard at the top of the screen. He also has stories of how NFL QBs learned plays from the game that they then used in crunch matches, but the most important legacy was the team that was brought together that gave the franchise its longevity. "I'm proud of the cultural phenomenon, because it's beyond all my expectations," Richard says. "But what turns out to be

"THE PERSPECTIVE WITH THE SCROLLING HORIZON WAS A MAJOR BREAKTHROUGH FOR FOOTBALL GAMES"
SCOTT ORR



COMPARISON CORNER

HOW RICHARD'S TWO GAMES COMPARE



NO PASSING WINDOWS

A feature Richard ditched to make *Madden* and *Montana* appear different was the three passing windows. Instead, you see what is in front of the QB's helmet

PLAYBOOK HALVED

Montana also has fewer plays to choose from, so as a quarterback you have a smaller amount of running and passing options.

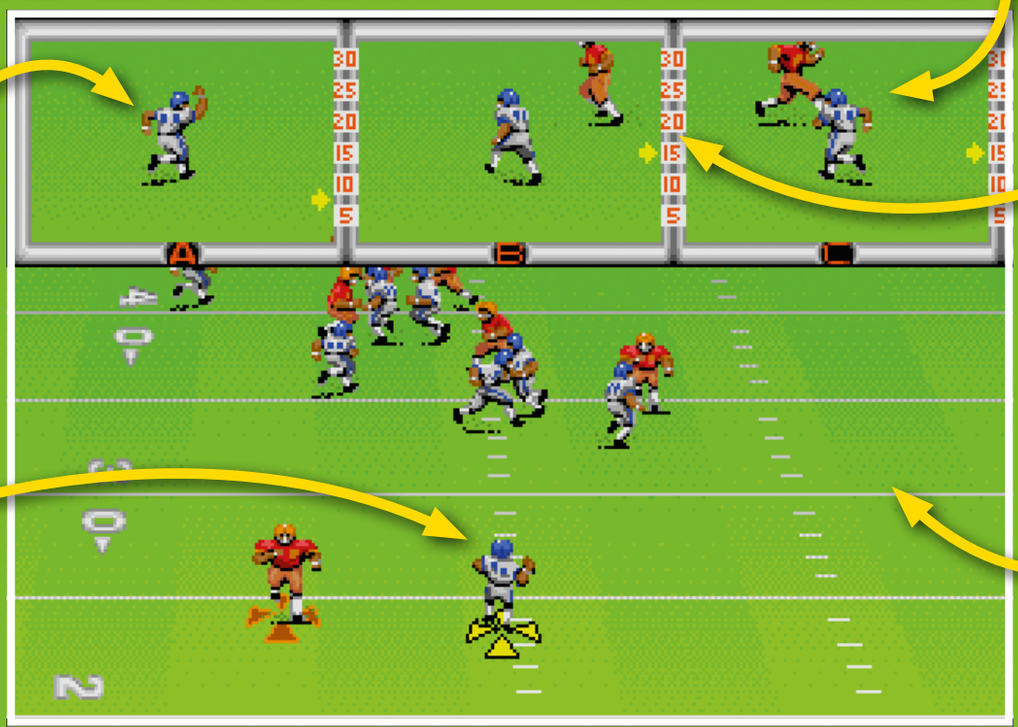
PLAYER SIZE & SHAPES

As *Montana* and *Madden* are virtually the same game, the sprites in the two titles are virtually indistinguishable.

2D TOP DOWN

The wonder of *Madden* was the field's 3D perspective. With *Montana* this has been replaced by Richard with a more top-down 2D effect.

JOE MONTANA VS JOHN MADDEN



PASSING GAME

Throwing the ball to a receiver was made user-friendly with three windows that corresponded to the Mega Drive's A, B and C buttons. *Montana* did not have this innovation.

GAME INFORMATION

As well as the passing window, *Madden* showed how far the receivers were away from the quarterback, which allowed you to judge the probability of a pass being completed.

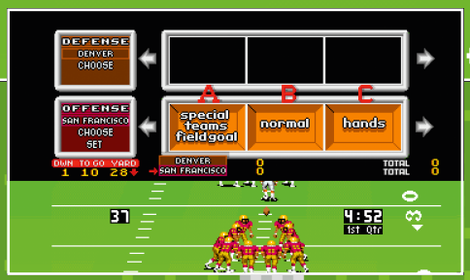
QUARTERBACK QUANDARY

With loads more plays than *Montana*, *Madden 90* offered a lot of options to explore when controlling the QB.

THE RIGHT PITCH

The playing area was in gorgeous 3D and was one of the reasons why *Madden* was superior. This didn't stop contrarians approaching Richard telling him their favourite game was *Montana*, though!

» [Amiga] Richard loved the Amiga's "beautiful colour sets" and it really shows in this version.



» [Amiga] Despite the loading times and disk-swapping, the Amiga version has smooth animation and slick movement.

» [Mega Drive] Kicking field golds was a fine art which mirrored the ranges that could be achieved by NFL players.

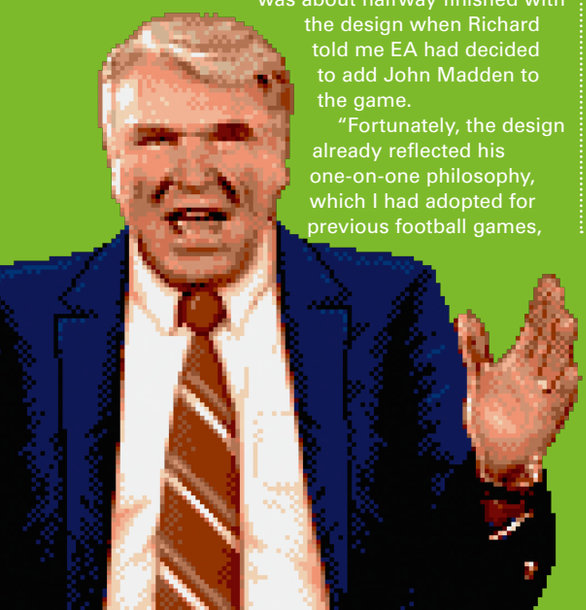
» [Mega Drive] One of the many options included playoffs where you vied for a chance to make the Super Bowl.

"I FINISHED MADDEN, WENT ON VACATION AND I CAME BACK AND WAS TOLD, 'YOU'RE GOING TO MAKE JOE MONTANA FOOTBALL; YOU'VE GOT FIVE WEEKS"
RICHARD HILLEMAN

the things that matter, and I'm really proud about, are mostly the people who have been through the series and what they've also done."

Scott is equally as effusive about the game's legacy and he believes it became a yardstick for all future sports games on every format, deservedly earning EA billions in sales. But it might have been a very different game, and it initially had a different name as John Madden dragged his heels about signing up again to a franchise that never looked like taking off.

"I believe *Madden 90* set a new standard," he concludes. "Not only for football games but for sports games in general. It was a near-perfect balance of action, strategy and fun that has evolved across multiple platforms for 30 years. It was initially going to be called *EA Football*. I was about halfway finished with the design when Richard told me EA had decided to add John Madden to the game.



"Fortunately, the design already reflected his one-on-one philosophy, which I had adopted for previous football games, so incorporating him into the game intro and comments was pretty straightforward. I made sure that he was much better integrated in the sequel, *Madden 92*."

That's not the only twist in the *Madden* tale. Nearly 30 years ago, NFL gaming fans had to choose between *Madden* and 'rival' *Joe Montana Football* on the Mega Drive, with some claiming the latter was a better game. Richard reveals that it was all one big fake play. "I finished *Madden*, went on vacation and I came back and was told, 'You're going to make *Joe Montana Football*; you've got five weeks,'" he says.

The reason EA had to produce two games for Sega is the Japanese company had spent a lot of money marketing a Joe Montana-fronted game which was being worked on by Activision. It wasn't going well, and at the last minute Richard had to step in to save Sega's blushes, which only gave him a five-week deadline.

"So we built a reduced version of *John Madden Football* that was called *Joe Montana Football*," he says. "Up on the wall is a plaque from the guys who made it. Basically, it's the only memorialisation that we did it. So it was one of those years we had a 100% market share. I, frankly, spent very little time rebalancing the game. I didn't try very hard to make it perfect. I kept waiting for somebody to knock on [the] door and say: 'So this is the same game, right?' but they never did."

And that's why people queue round the block to get the latest *Madden*, while Montana is a surname only people of a certain age remember. "Every year I drive by the local Toys R Us as soon as it opens at midnight," Richard concludes. "I remember in *Madden*'s 20th, 22nd or 23rd year, I drove by and there were 100 people in line. I sat in the parking lot and I just shook my head for a good, solid minute, and then I drove back home, saying, 'This is crazy. How could all of this happen?'"

It happened because the diverse team that was hired by Richard brought a whole new generation of gamers to the Mega Drive, especially African Americans and people of colour outside of the United States. Those new fans stayed gamers all their lives, and that emphasis on diversity early on is the reason why players can take the knee in honour of the Black Lives Matter movement, or make Colin Kaepernick's black power fist when scoring a touchdown, in *Madden 21*. It's why EA's Gordon Bellamy, who ensured that *Madden 95* had a majority of black players, revealed in Netflix miniseries *High Score* that *Madden 90* was the first game he could truly identify with as an African American gay man. Put simply, *Madden 90* made gaming inclusive. ★

Genesis 3

» **MANUFACTURER:** Majesco » **YEAR:** 1998
» **COST:** $49.95 (launch), £45+ (today, boxed), £35+ (today, unboxed)

Much has been made of Sega's 1996 decision to concentrate all of its support on the Saturn. While the Game Gear was at the end of its natural life and few would mourn the 32X, many believed that there was still some money to be made in the 16-bit market. The decision-makers at Majesco also believed this and entered into a licensing agreement with Sega to issue a new model of the Genesis in the US, as well as reissuing a variety of games. The result was the Genesis 3, a much smaller and lighter version of the decade-old console sold at a bargain basement price.

In order to lower manufacturing costs, a number of features were removed from the console, including support for the Power Base Converter, Sega CD and 32X peripherals. This essentially restricted the system to playing Genesis cartridge games only, though the cartridge slot was shaped such that Japanese games without region-locking code would work. Additionally, *Virtua Racing* was incompatible with the console, as well as certain games that misused a bugged instruction in earlier versions of the console. The Genesis 3 also only offers mono audio output, though it does retain RGB video capability. ✱

ESSENTIAL GAME
Mega Bomberman

With the Genesis 3 being so small and light, it's an easy console to pick up and chuck in a bag. As such, it's easy to introduce some classic 16-bit gaming to any social situation – and if you're doing that, you should pick an appropriate game for the occasion. So we'd advise you to bring along *Mega Bomberman* and use the extra space in your bag for some additional controllers and, as we're using the American terminology, a Team Player adaptor. Before you know it, you'll all be having a blast – and probably catching yourself in the line of fire, as we often do.

SYSTEM SUPPLIED BY **EVAN AMOS**

Genesis 3 fact

■ It's possible to restore *Virtua Racing* and Game Genie functionality to all Genesis 3 consoles, as well as Master System and 32X support on VA1 motherboards, with some simple mod work.

PROCESSORS: MOTOROLA 68000 16-BIT CPU (7.67MHZ NTSC/7.60MHZ PAL), ZILOG Z80 8-BIT CPU (3.58 MHZ NTSC/3.55 MHZ PAL)

RAM: 64KB MAIN MEMORY, 64KB VIDEO MEMORY, 8KB AUDIO MEMORY

GRAPHICS: SEGA/YAMAHA YM7101 VDP, UP TO 320X480 DISPLAY (320X224 TYPICAL), 64 COLOURS FROM A PALETTE OF 512, 80 SPRITES ON-SCREEN

AUDIO: YAMAHA YM2612 SOUND CHIP, SIX FM SYNTHESIS CHANNELS, PLUS TEXAS INSTRUMENTS SN76489 FOUR CHANNEL PSG

MEDIA: MEGA DRIVE ROM CARTRIDGE (UP TO 32 MEGABIT)

25 YEARS OF WORMS™

For a quarter of a decade, Team17's warmongering invertebrates have done battle on computers, consoles and even phones around the world. We speak to the brains behind the belligerence to break down the key components that define this enduring series

WORDS BY NICK THORPE

Fwoosh! The unmistakable sound of a bazooka launch rings out from the TV's speakers. "Oh no!" says the player who fired the shot, as the force of wind turns it back towards their own Worm. Boom! The missile narrowly misses the Worm but takes out the ground beneath it, sending it plunging into the briny depths below. "Stupid!" rings out of the TV in a high-pitched voice, but one now drowned out by the laughter of the players in the room. Ever since Andy Davidson designed the Amiga original 25 years ago, *Worms* has enabled chaotic scenes like this in living rooms and bedrooms across the world, joining an elite list that have endured over such a long time.

Since its inception, *Worms* has evolved in all sorts of ways. For Team17, it morphed from a surprise hit into the company's key franchise – and for a time, the entire focus of its development output. As a game, it has developed through 3D and back to 2D, with new weapons and features constantly rotating in and out. For its community, it has gone from a casual, knockabout multiplayer experience to a tense and nuanced game with recognised strategies and player-created game schemes. Perhaps most impressively of all, it has gone from being an excellent spin on the artillery strategy genre to being the most recognised game of its kind. Over the course of this feature, we'll break down the characteristics that have made *Worms* such a long-running success, and see how they've evolved over time.

KEVIN CARTHEW
CREATIVE DIRECTOR, TEAM17

» [Amiga] *Worms* is great because it's the only series of games that allows you to play with a Concrete Donkey.

» [PC] These guys had better watch their position, one bad explosion will send them into the drink.

» [PS3] Thwart your smug darkside friend's attacks with a powerful electromagnet. We never leave home without one!

ARTILLERY EVOLVED

HOW WORMS MADE AN ART OF REFINING A GENRE

The core of *Worms*' gameplay was not something new – artillery strategy games like *Tanx* and *Scorched Tanks* were a staple of the Amiga's public domain scene. Like those games, *Worms* offered players the chance to take part in turn-based combat, firing long-range weapons by adjusting trajectory and power, as well as factoring in terrain and wind. Since those games had been popular with players, particularly as multiplayer experiences, it's no surprise that *Worms* attracted the same kind of popularity. However, simply adopting a popular game design well doesn't explain how *Worms* went on to become a cross-platform success of a different scale.

"I think *Worms*' big innovation was bringing platforming to that genre. Up until then, I think most artillery games were fixed – I think in *Scorched Tanks* you could teleport, maybe," says Kevin Carthew, creative director at Team17.

"You could move around very slowly," interjects Colin Surridge, senior programmer.

"But it wasn't like *Worms*," says Kevin. "It wasn't like where you could master something like the Ninja Rope, or eke a little bit of extra movement time out of the Parachute." Indeed, there's plenty of room to become great at *Worms*. A good player might consistently throw Grenades accurately, but a great *Worms* player can Ninja Rope their way across the whole map to deliver a humiliating death by poke.

Of course, that creates some tension. "*Worms*, when it first launched, was seen as this post-pub casual game, before we had labels for games like 'casual games' and things like that," says Kevin. "If you compare *Worms* to a casual game of today, it's anything but. You've got quite a complex character with a complex moveset, with a big weapon arsenal, that can do lots and lots of different things." To retain the accessibility needed for a good multiplayer game, additions have to be carefully considered. "Buildings don't really need any introduction," says Kevin of the *Worms WMD* feature. "You walk up to one, as soon as you go inside the front of it pops off and you're hidden on the inside. There's no extra complexity, no controls to teach."

What has changed more often has been the way the formula has been applied – we've seen the 3D entries in the series that require additional dimensional calculations, the motion controls of *Worms: A Space Oddity*, and the introduction of a class system in *Worms Revolution*. Not all of these have stuck about, but they have been crucial in ensuring that the series continues to offer fresh experiences. That's especially important as there are few competitors in the artillery strategy genre, and it's fair to say that all of them exist in the shadow of Team17's wriggly warmongers. ▶

» [Amiga] Loathe as we are to criticise the mighty *Amiga Power*, 60% was a pretty stingy review score.

» [PSP] Kevin feels that the mobility of the Worms was what set the series apart in the artillery strategy genre.

» [Switch] *Worms* has come to dominate its genre to the point that many people would label any artillery strategy game a '*Worms* clone'.

GET READY TO RUMBLE

HOW WORMS RUMBLE PUTS AN ACTION-PACKED TWIST ON A CLASSIC FRANCHISE

The *Worms* series does play host to the odd spin-off, with the likes of *Worms Blast*, *Worms Crazy Golf* and *Worms Pinball* all taking the characters out of their usual setting. However, the series' latest spin-off, *Worms Rumble*, manages to take quite a radical departure from the usual design while retaining much of the familiar combat gameplay. The new game still features combat on a 2D plane, but this time it takes place in real time, making it much more akin to the likes of freeware favourite *Soldat*.

Of course, the Worms haven't historically been super quick, so this isn't simply a matter of keeping the same basic structure and just letting every player move at the same time. "It's so fast that everything just needs to happen quicker," explains Kevin. "It feels like all of the decisions in *Worms* that can be stretched out over half an hour are compressed really tightly into five minutes." Movement is faster, and weapon interactions are far more immediate. "You don't power the bazooka up for example, it always fires at a fixed velocity, there are no fuse settings for grenades or anything like that," Kevin tells us. "There's no weapon panel, there's very little UI in the game."

Despite the action-oriented nature of the game seemingly favouring lightside players, some of the sneaky tactics are definitely in place. "I can happily hide in a vent, waiting for someone to come into the vent and then pick them off unawares, in the same way I can hide in a building in *Worms WMD*," Kevin highlights.

"It's a great way to lose friends," adds Colin. The one major departure is the lack of random stage generation, with levels being fixed with simple mutators. "Because it has various game modes, like Last Worm Standing, probably the closest thing to a battle royale mode, we wanted players to be able to learn the maps," Kevin tells us. "And the maps have to be quite tightly designed in the way they'll cut off sightlines, how they'll allow you to mitigate against skilful players using a variety of weapons, so it just works so much better for this style of game."

Worms Rumble is scheduled for release on 1 December 2020 for PC, PS4 and PS5.

Annelid antics

Comedy is one of the key ingredients that keeps Worms turning

Adding a bit of character went a long way towards making *Worms* the global success that it is today. Much like another Amiga hit, *Lemmings*, *Worms* was an exercise in squeezing as much personality as possible out of characters that were just eight pixels tall, expressed as they flip through the air in explosions or turn to face the player before detonating themselves. Crates could occasionally contain Sheep or Banana Bombs, and in the CD versions, rounds were punctuated with FMV skits of Worms accidentally missing teleports or unexpectedly meeting a flamethrower-wielding enemy. Having seen success with comedy, Team17 went all-in for the second game. The silly weapon quotient was increased, and the Worm character was overhauled with a new cartoon style. Later on, higher resolutions and 3D models helped draw out additional expressiveness.

» [PC] Ah yes, the fruit machine jackpot is a bunch of dynamite that's about to explode. How very 2020.

» [PC] Who needs live ammunition when you can fire hamsters at your enemy's face?

But just as it does elsewhere in life, much of the best humour in *Worms* comes from those unscripted moments that nobody could reasonably plan for. "Sometimes I think people think the comedy of the game might come from the funny things that the Worms do, which is obviously important to me as an animator," says Andy Morriss, principal animator at Team17. "But a lot of the time it's emergent from the crazy things that you're doing while trying to play the game. This is generally the thing that makes people laugh, so the Worm is really just a vehicle for those comedic situations." This is supported by certain design choices, such as not overexplaining the weapons. "There's an element of 'try it and see what happens'," says Colin.

» [PSP] Much of *Worms*' humour is derived from moments that make people ask, 'Was that what you meant to do?'

"The comedy is there, when it explodes in your face after 30 seconds of moving carefully around the landscape," agrees Andy.

"We had weapons that could do as much harm to you as they could your opponents, there was a bit of luck, like Mail Strike – you never quite knew where [the letters] were going to land," Colin continues.

There's definitely some intent to the comedy though, as evidenced by the topical references sprinkled throughout the series. "We had an Indian Nuclear Strike around the same time that it was in the news that India was becoming a nuclear power, we had Flaming French Sheep Strike at the time when the French were burning our sheep, and stuff like that," remembers Colin. "There's a lot of puns, and a lot of stuff we did that we probably couldn't do today." Often though, it's simple silliness that goes a long way. "I don't know where it came from, I don't even know what the joke is, but the Inflatable Scouser from the 3D games," says Kevin. "Like, why? Why did we do that?" We may never know, but it's right at home in the *Worms* universe.

Evolutionary study

How has the look of the Worms we know and love changed over the last 25 years? We find out through the medium of promotional artwork

Worms

■ These guys are really wormy worms, with the ringed texture going on and everything. They're mean, though – they've got tattoos on their non-knuckles, they're very heavily armed and the one on the right is smoking. Surprisingly, that detail was censored on console packaging in the USA but fine in Europe.

Worms Armageddon

■ This one doesn't immediately look like a worm, but we do know that it's utterly terrifying – horrible teeth, which he is clearly armed to, and a real mean expression. It's a baffling character, especially given that it stands in stark contrast to the very cute depictions in the actual game.

Worms Reloaded

■ Around the time of *Worms 3D*, the character design became more standardised across games and promotional artwork, with huge heads making the designs look quite top-heavy. We're not complaining – they're much cuter than the thing on the front of *Armageddon*, and became quite familiar over the years.

EXPANSIVE ARSENAL

LANDMINES OR LAUGHTER? WITH THE WEAPONRY OF WORMS, YOU NEEDN'T CHOOSE

One of the big distinguishing features of *Worms* early on was its variety of weapons and utilities – which were mostly pretty conventional in that first game. "That core weapon set honestly hasn't changed an awful lot throughout the years, and we've found it hard to bring either weapons or utilities to move the strategy away from Bazooka, Grenade, Blowtorch, some sort of movement utility like a Girder or a Ninja Rope – finding things that really stick and really complement the strategy is surprisingly difficult," says Kevin. "Once you get beyond that, it's funny things that blow up, right – you've got the Concrete Donkey, you have exploding Sheep, you have exploding Bananas, you have Holy Hand Grenades."

This means that each game's weapon set must serve two purposes. "Sometimes weapons begin life as, 'What's going to be funny? What fits the theme of the game? What fits within the *Worms* universe?' And sometimes the consideration is how does it complement, or work actively against, a known strategy." These strategies include the 'lightside' and 'darkside' alignments, with the former favouring maximum aggression and high mobility, and the latter preferring to dig into terrain and shield themselves before launching an air strike from afar. "It wasn't something we named, it kind of got named by the public," explains Colin.

"The darkside strategy, that's entirely where the Bunker Buster came from, it's where the Mole came from," adds Kevin.

Because the core strategies have remained well-defined for so long, when significant new elements do come along, reception from the hardcore crowd can be mixed. In the *Worms Revolution* games, the introduction of a new physics engine allowed for new mechanics like dynamic water, which could eliminate fires and flush Worms through tight corridors. These were cool elements, but they came at a cost, as the new physics engine couldn't replicate things like the classic unrealistic Ninja Rope physics. Even *Worms WMD*, which took the *Worms Armageddon* template as its starting point, wasn't immune due to the inclusion of mech walkers, helicopters and tanks. "We did get a lot of feedback that the vehicles were overpowered," explains Kevin.

Arguably though, any new weaponry needs to make an impact – which is why the new inclusions tend to have fairly spectacular effects, and are often paired with the most outlandish themes. "They have to be reasonably spectacular to warrant the work to add them in the first place," says Colin. "They've got to be a bit different, and quite frankly just another type of hand grenade wouldn't be worth doing – it wouldn't be adding anything." So whenever you pick up a new *Worms* game, it's well worth trying the newest inclusions in the armoury – you'll probably do a lot of damage, or at least make a giant fool of yourself.

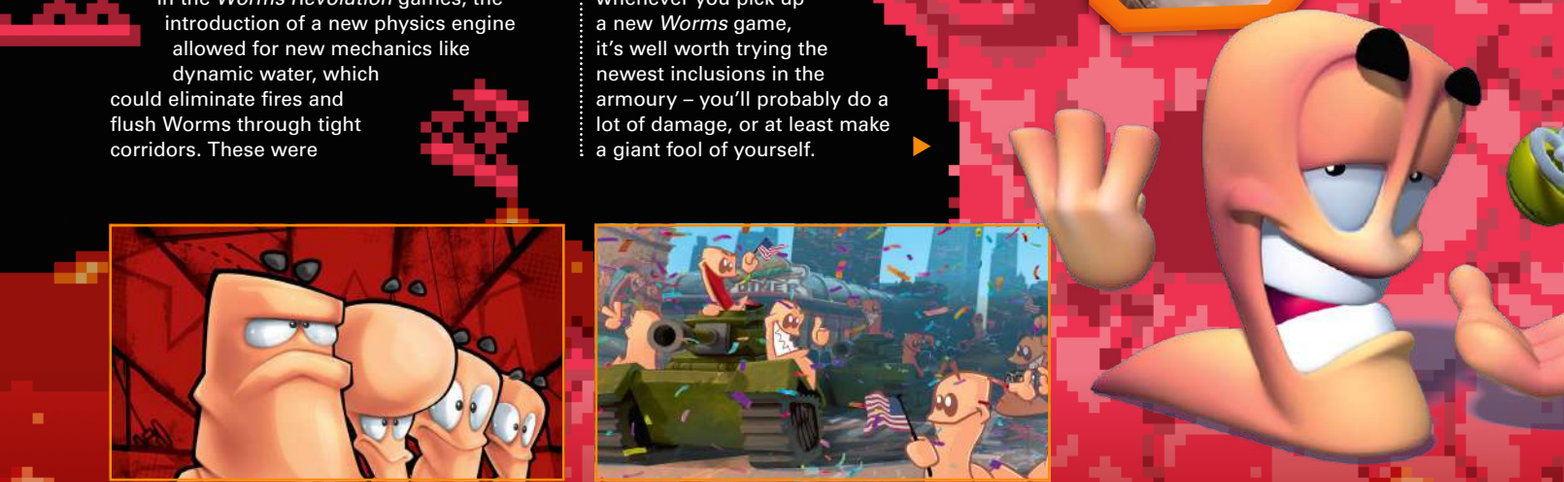
» [PSP] The Bunker Buster was a smart addition, specifically targeted at sneaky players who like to tunnel underground.

» [Xbox 360] You could have some good fun with the Water Pistol, like Michael Douglas in *Falling Down*, but it relies on a physics engine.

» [Switch] Some think the weapons in *Worms WMD* are overpowered, we think they're just a great way to cause carnage.

COLIN SURRIDGE
SENIOR PROGRAMMER, TEAM17

ANDY MORRISS
PRINCIPAL ANIMATOR, TEAM17



WORMS REVOLUTION

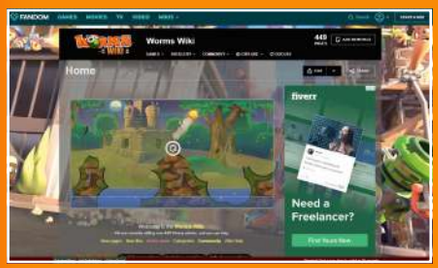
■ The smoother, more cartoonish look continues here, but there's a distinct evolution going on as the class system in the game gives us visually distinct characters that should excel at different tasks. The chap in the front is quite angular – not an adjective we usually associate with worms, but it works.

WORMS WMD

■ We've gone full comic book now, with flat colours and simple lines. That's pretty good, as the in-game characters were on that path as early as the late Nineties, but what we really like about this one is the crazy look – it's almost as if someone was trying to evoke the energy of *Invader Zim*.

Recruitment centres

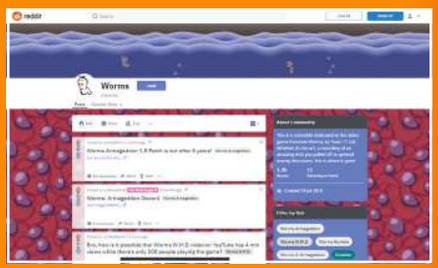
FIVE KEY FAN SITES FOR ALL POTENTIAL WORMS CADETS TO CHECK OUT



Worms Wiki

worms.fandom.com

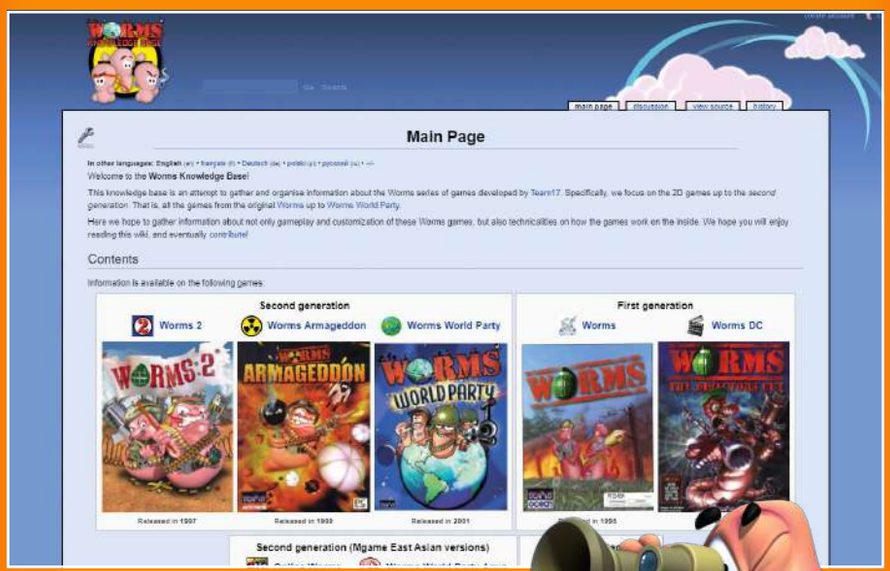
Here's a good general-purpose information source for the entire series, covering the various games, weapons, strategies and more from the past 25 years.



Worms subreddit

www.reddit.com/r/worms

This is a community for discussion of the games, and like other Reddit communities, tends to focus on news and new developments like *Worms Rumble*.



Worms knowledge base

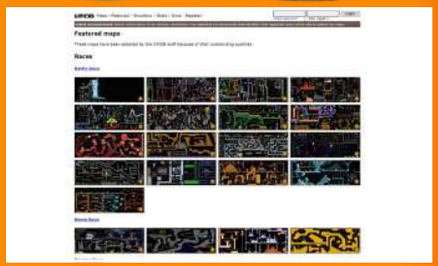
www.worms2d.info

If you strongly prefer the early *Worms* games, this site aims to gather everything you could want to know about the games up to *Worms World Party*.

The Ultimate Site

www.tus-wa.com

Evolving from The Ultimate Tourney, this competitive community plays *Worms Armageddon*, hosting leagues and cups, map packs, schemes and an active forum.



Worms map database

www.wmdb.org

If you ever find yourself bored with random terrain in *Worms Armageddon*, check out this repository of community created, hand-crafted and properly formatted maps.

» [PC] These opposing forts in *Worms Revolution* show what can be achieved with a bit of structure.

» [PC] Unlike the procedurally generated stages of old, *Worms WMD*'s stages look beautiful and still offer enormous variety.

» [PS2] Kevin tells us that recently, there has been fan enthusiasm for the return of *3D Worms* games.

» [PC] *Worms Armageddon* is regarded by many in the community as the defining game of the series.

Nick Gamersall
Art director, Team17

ALL TERRAIN WARRIORS

THERE'S MUCH MORE TO WORMS' STAGE DESIGN THAN A SIMPLE RANDOM TERRAIN ENGINE

One of the brilliant things about *Worms* is that the characters never really feel out of place in a particular location, meaning that the series has had a great scope for interesting stage design right from the start, when combatants visited forests, frozen wastes and even Hell – and then blew all of them to smithereens. In those early days, random terrain generation was sufficient, but as more structured single-player challenges were introduced in the second generation of *Worms* games, fixed level designs became necessary. "If you go back to *Worms 2* and *Worms Armageddon*, we would have full landscape size, hand-authored, beautiful images," remembers Kevin. "Sometimes we would get the image and say, 'Right, we'll make a level out of this,' and build some single-player content out of this beautiful image, or sometimes the designers would make black-and-white masks that looked like nothing, but would play in a very specific way. That would be hell for the artists, because we'd have to say, 'Make this abstract shit that I've drawn represent something.'"

As it happens, that tension between carefully designed stages and random generation persisted for well over a decade, until *Worms WMD* managed to hit a sweet spot between detailed predrawn assets and random stage elements. "It was a bit of a shot in the dark and it was a bit of a brave move as well, because the system for randomly generating the landscapes had been, by and large, the same ever since the first *Worms* game," says Kevin. "With *Worms WMD* we were proposing to change all that, which to producers sounds like madness because why would you fix something that ain't broken? It's a big risk you're adding to the project. But we really wanted to get away from the landscapes looking like this big squiggly blob thing with a repeating texture, and then you plonk some objects down on top of it and Bob's your uncle. We wanted the game to be eye-catching and stand out."

"We ended up creating bespoke, individual little land components that could fit together nicely," says Nick Gomersall, art director at Team17. "The aim was always to make it look like a beautiful picture, like every single rendition of the landscape was bespoke almost." Of course, this increases the burden on the art team. "It was a lot of artwork. We changed it as we went through and did the different themes – the very first theme was something like 40 different pieces. By the end of it, we got really quick at making them, all credit to the artists that worked on the project." Not only did this create a striking new look, but allowed the stage designers to make more use of random generation.

» [PC] *Worms Armageddon* included a level editor, allowing hacks like us to do 'celebration' stages like this. Sorry.

EAGER RECRUITS

YOU DON'T MAKE IT 25 YEARS WITHOUT PICKING UP SOME DIEHARD FANS ALONG THE WAY

While the players are ultimately the lifeblood of any game, it's always much more evident with multiplayer games – and *Worms* does have an incredible reach, with millions of players having experienced the series in one form or another. As well as being a mainstay of traditional computer and console formats, Team17 has been able to expand the *Worms* audience by being quick to embrace emerging digital markets, with the series experiencing success when it hit Xbox Live Arcade, iOS and even Facebook. "We were number one in the Brazil iPhone charts – not just games, but all apps – at the time of the last World Cup, and the Worm was holding a big Jules Rimet trophy and we had Brazilian flags flying and things like that," says Kevin. "It always blows my mind a little bit that this thing we make in Yorkshire, which is really silly and daft, exports all around the world in the way that it does."

If you're not so invested in *Worms*, you may be surprised to find that the series has a particular singularly popular entry. "*Worms Armageddon*, hugely enduring game, built off the *Worms 2* engine. *Worms World Party*, pretty much the same game with a few extra features," says Kevin. "But that's the game that the hardcore still play today, and they've got such an entrenched, fixed idea of what the game should be – anything that moves away from that causes ripples." That's not to say that the community hates innovation, as players' own inventions have shaped the direction of the series. "Some *Worms* games have had 'rope racing' modes – rope racing was something entirely invented by the community. There has been lore created by the community, such as the 'Buffalo Of Lies', and we realised the Buffalo Of Lies as an actual weapon in the games," Kevin tells us.

Of course, the community does extend beyond the vocal hardcore too, and they have different desires. "You tend to find that players who haven't been around since the days of *Worms Armageddon* have a less fixed idea of how they want the strategy to play out,"

» [iOS] *Worms* picks up plenty of fans outside of the traditional PC and console dynamic, on mobile platforms and elsewhere.

says Kevin. "New players, or players that have come to the game at a later generation, for example on iPhone or Xbox Live Arcade, where it felt like a more casual experience, they tend to love the new features and get on board with the new features." As a result, Team17 can keep creating for those players that want new features, while fans of the old ways benefit from modern technology, as *Worms Armageddon* remains perpetually available on modern PC game storefronts and even received an official update in 2020, and *Worms World Party Remastered* is also on sale. ✱

Moonstone: A Hard Day's Knight

COME FOR THE PUN. STAY FOR THE FUN

» AMIGA » 1991 » ROB ANDERSON

You've probably seen plenty of hints from RetroGames Ltd that an Amiga-shaped system is on the way in 2021. If it is indeed a mini version of the popular 16-bit computer, I'm really hoping that *Moonstone* is one of the games that gets selected to appear on it, as it's a cracking bit of fun.

I never owned *Moonstone* back in the day, but I did get to play it at a friend's house. If I'm honest, it didn't grab me immediately because the combat is a little stodgy and clunky, and I was used to the fast responsive controls of titles like *Final Fight* and *Streets Of Rage*. I stuck with it, though, partly because my friend promised me it was "really good", and partly because it was so stupidly gory, like ridiculously gory. Also, I love a good pun and The Beatles, so *A Hard Day's Knight* tickled me greatly.

I used to love playing *Advanced Dungeons & Dragons* back in the late Eighties and early Nineties, and our Dungeon Master, John, loved describing combat encounters as viciously and as gruesomely as possible to us. Playing *Moonstone* in all its brutal glory instantly reminded me of those many adventures in the Forgotten Realms, so much so that the clunky controls of *Moonstone* were soon forgotten about.

And that's important because there's far more to *Moonstone* than its buckets of claret and grisly deaths suggest. It's actually a snazzy combination of turn-based exploration and real-time combat as you attempt to return the mystical Moonstone to Stonehenge before three rival knights (AI or player-controlled) do. Experience points will level you up, powerful weapons can be acquired (all the better for eviscerating your foes and rival knights) and your dangerous quest will see you exploring a variety of different environments, from open plains to stark, desolate wastelands, leaving a bloody trail of bodies as you go. Add in some beautiful-looking cutscenes and some great enemy designs, and *Moonstone* has all the ingredients to ensure a new generation of gamers will enjoy it just as much as I did in the Nineties. ✱

RETRO GIFT GUIDE 2020

If you're reading this magazine, we'd guess that you're the sort of person that will part with your pennies for a good bit of nostalgia – and thankfully, there is no shortage of companies out there willing to offer that to you. Whether you're buying for a loved one or simply looking to treat yourself, here are some of the most enticing retro products of the last year

WORDS BY NICK THORPE

CONSOLES

THIS YEAR HAS BEEN ANOTHER GREAT ONE FOR RETRO CONSOLES, WITH FANTASTIC NEW LAUNCHES TO SUIT A VARIETY OF DIFFERENT TASTES AND BUDGETS

EVERCADE

MANUFACTURER	Blaze Entertainment
WEBSITE	www.evercade.co.uk
RETAILER	www.funstock.co.uk

Blaze's new handheld proved to be a brilliant surprise earlier this year, combining a budget-friendly price with solid hardware and a good range of licensed classics, including collections from Namco, Data East, Atari and more. These multi-game collections are released on nicely presented cartridges, as the Evercade is designed to deliver the fun of collecting games as well as playing them. Each cartridge costs £14.99 and contains anything from two to 20 games. The console is solidly constructed and comfortable to use over extended periods, with a great d-pad and satisfyingly clicky shoulder buttons. Since our review, firmware updates have resolved the problems we had with the control configuration options for a number of games.

When it comes to long-term support, four new cartridges have joined the ten that were available when we reviewed the console – *Atari Lynx Collection 1 & 2*, *The Oliver Twins Collection* and *Xeno Crisis/Tanglewood*. Additionally, *Jaleco Collection 1*, *Piko Interactive Collection 2* and *Indie Heroes Collection 1* have all been announced for the future. If you find that plug-and-play mini consoles tend to end up going back in the cupboard quickly due to their limited libraries, this may well allow the Evercade to hold attention for longer.

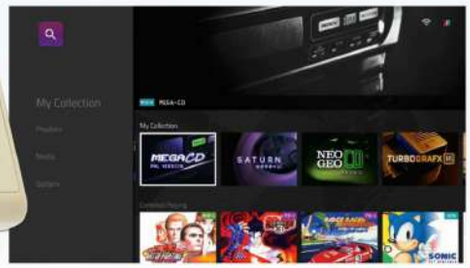
THE C64

MANUFACTURER	Retro Games Ltd
WEBSITE	www.retrogames.biz/thec64
RETAILER	www.amazon.co.uk

If home computers are your true love, this great piece of work will take you right back to the Eighties. The plug-and-play side of things offers a great range of games, including the likes of *Boulder Dash*, *Impossible Mission*, *Paradroid* and *Winter Games*, as well as a good set of Llamasoft favourites. But the fun doesn't stop there, as there's support for loading your own programs, and you can even write your own.

While the miniature return of the best-selling computer was good, this full-sized version allows you to make use of the keyboard, which is much more convenient than the virtual keyboard on the C64 Mini. This version also made some great strides in terms of joystick quality and user-friendliness out of the box. Add that to the excellent display modes available across versions, which support pixel aspect, PAL and NTSC screen ratios as well as a CRT filter, and it's easy to see a lot of care has been taken here. A special limited edition version, The VIC-20, is also available for the same price this Christmas – both systems support C64 and VIC-20 modes, so the difference is in the built-in games and external appearance.

£109.99



£464.99

POLYMEGA

MANUFACTURER	Playmaji
WEBSITE	www.polymega.com
RETAILER	www.amazon.co.uk

If you're looking for retro gaming luxury, the Polymega delivers in impressive fashion. It supports games for a variety of CD-based consoles out of the box, including the PlayStation, Saturn, Neo Geo CD, Mega-CD and PC Engine CD, with wireless controls and 1080p HDMI output as standard. Hassle-free installations allow you to play a variety of games without having to swap discs constantly too, and if you run out of space, external hard disks or optional internal SSD storage options are supported. There's no need to bother with System Cards, RAM expansions or region switches – all of that is handled for you.

For an additional £109.99 each, you can pick up Element Modules, each of which slots onto the console and gives access to cartridge and control ports for a popular system, including the NES, SNES, Mega Drive and PC Engine. While you can only attach one at a time, cartridge games can be installed to internal storage, just as CD games can, and take up barely any space. The system and Element Modules also come with some preloaded games, too. If space is at a premium in your home setup and you value convenience highly, the Polymega might just be the console for you.

PC ENGINE COREGRAFX MINI

MANUFACTURER	Konami
WEBSITE	www.konami.com/games/pcemini/
RETAILER	www.amazon.co.uk

The PC Engine is arguably the best console never to receive an official release in the UK, and Konami's slightly shrunken version is an absolute treat for anyone who loves games from the late Eighties and early Nineties. As well as a pretty authentic recreation of the console – the grey CoreGrafx model in the UK, rather than the nicer white console that Japan gets – you'll get emulation by the reliably good retro specialists at M2. Two pads are supported as standard, which beats the original hardware, but you'll have to pick up the second separately.

While many players will find that the nostalgia factor isn't the same as with the Nintendo and Sega mini consoles, the PC Engine Mini is absolutely packed with games, and there's a lot of fun to be had in discovering new favourites. There are big-name offerings like *Castlevania*, *Bomberman*, *R-Type* and *Ghouls 'N Ghosts*, as well as excellent PC Engine originals like *Bonk's Revenge*, *Neutopia* and *Chew Man Fu*. The only slight downer is that some games are in Japanese only, like the excellent *Snatcher*. Don't forget to check out the extra secret games, too – the reconverted *Fantasy Zone* that's much closer to its arcade counterpart stands out as a particular highlight.

£99.99

ALSO ON IMPORT

GAME GEAR MICRO

MANUFACTURER	Sega
WEBSITE	60th.sega.com/en/contents/ggmicro/
RETAILER	www.amazon.jp

Sega's battery-hungry handheld is back in *extremely* small form, to the point that it's arguably more of a gimmick than a serious way to play, but hardcore fans will still get a kick out of it. Each of the four models offers a different selection of four games, ranging from Sonic on the black model and *Gunstar Heroes* on the blue one, to text-heavy RPGs on the red and yellow ones.

¥4,980

READING MATERIAL

SOMETIMES, IT'S GOOD TO PUT DOWN THE CONTROLLER AND PICK UP A BOOK – BUT MOSTLY SO YOU CAN READ ABOUT WHAT YOU'VE JUST BEEN PLAYING, OF COURSE

THE GAMES THAT WEREN'T — £29.99

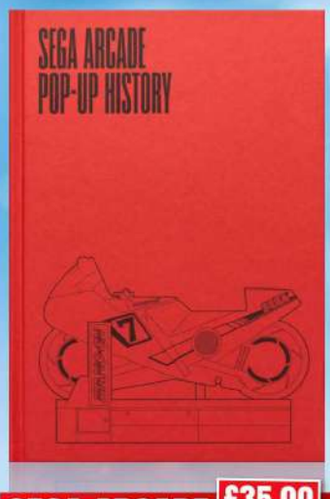
AUTHOR Frank Gasking
RETAILER www.bitmapbooks.co.uk

If you're familiar with the *Games That Weren't* website, you'll surely know of Frank Gasking, who has been tirelessly documenting unreleased games for many years now. This book is his greatest work so far – the culmination of years of work, covering cancelled games from the earliest days of videogames to the modern era. Throughout this book's 644 pages, you'll see everything from controversial and highly publicised projects like *Thrill Kill* and *Sonic X-treme* to lost versions of games like *Half-Life* and *The Last Ninja*. If that wasn't enough, plenty of developers have been interviewed to get the inside story of these doomed projects.

NBA JAM — £11.58

AUTHOR Reyan Ali
RETAILER www.amazon.co.uk

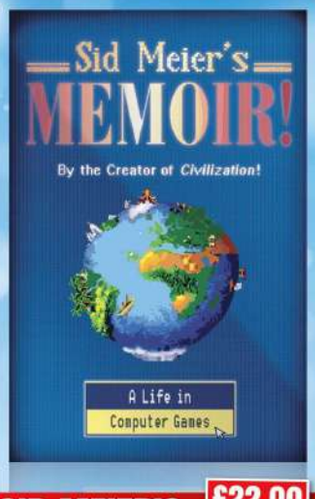
NBA Jam was an arcade phenomenon in the mid-Nineties, and Reyan Ali has produced an astonishingly in-depth narrative of the game's creation. From a personal profile of coder Mark Turmell that explores his early years in gaming, to the licensing negotiations that allowed the game to exist, no stone has been left unturned. That means you'll also follow the aftermath of the game's success, discovering how Midway lost its billion-dollar baby and how the series ultimately fell from grace. After reading this, it's highly likely you'll never wonder anything about *NBA Jam* again – except maybe if we'll ever see Michael Jordan's custom version.



SEGA ARCADE: POP-UP HISTORY — £35.00

AUTHOR Keith Stuart
RETAILER www.readonlymemory.vg

Points go to Read Only Memory for innovation, here – this is the first videogame history book we can think of to use the pop-up format, and it makes sense to apply that to Sega's mid-Eighties arcade legacy. The models devised by Helen Friel and Tam Kang don't always come up quite as you'd hope they would, such is their complexity, but they do show off the unique cabinets that made games like *Space Harrier*, *Out Run* and *After Burner* such thrilling attractions in arcades. We also love the inclusion of concept sketches, showing the famous cabinets before they took their final forms.



SID MEIER'S MEMOIR! — £22.00

AUTHOR Sid Meier
RETAILER www.amazon.co.uk

You've got to hand it to Sid Meier, he knows his branding and uses it well – we couldn't help but chuckle at the title of this book. Here, the acclaimed developer reflects on his career in creating computer games, starting with the foundation of Microprose in the early Eighties and taking in classics such as *Pirates!*, *Railroad Tycoon* and *Civilization*, and stopping just short of *Civilization VI*. It's a fun read, as the author is keen to focus on amusing anecdotes over technical minutiae, and for all of his legendary status in the business, he's really quite humble and keeps the games themselves firmly in the spotlight.

DON'T FORGET

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WWW.MAGAZINESDIRECT.COM

MUSIC

WHETHER YOU'RE ALL IN ON THE VINYL REVIVAL OR STILL CLINGING TO COMPACT DISCS, SOME GREAT GAMING SOUNDTRACKS GOT PHYSICAL RELEASES OVER THE LAST YEAR

£19.99

SHENMUE II

MANUFACTURER	Data Discs
WEBSITE	data-discs.com
RETAILER	data-discs.com

The excellent musical accompaniment to the best game in the *Shenmue* series [Feeling controversial there, Nick? - Ed] has been released on vinyl by the prolific folks at Data Discs. If you've ever found yourself wandering around a virtual Kowloon, wondering whether you should really blow your money on another game of Lucky Hit, this is the perfect way to transport yourself back to those Dreamcast days. Just be warned that this one's not due to ship until after Christmas – but let's be honest, any *Shenmue* fan will be used to delayed gratification after waiting for the third game.

£50.00

STREETS OF RAGE 4: THE DEFINITIVE SOUNDTRACK

MANUFACTURER	Brave Wave Productions
WEBSITE	bravewave.net/genseries
RETAILER	bigwax.io/collections/brave-wave-productions

Okay, so *Streets Of Rage 4* came out this year – but we're hardly ones to quibble when the game was as good as it was, bringing the series back in style. The soundtrack naturally contains the work of Yuzo Koshiro and Motohiro Kawashima, the men behind the sound of the beloved Nineties originals, but also excellent new work from the main composer Olivier Deriviere, as well as guests such as Yoko Shimomura. The 35 tracks are spread across three LPs and specifically remastered for vinyl, and liner notes from all of the composers, plus artists and developers, are included in an additional booklet.

£35.00

8-BIT SYMPHONY PRO

MANUFACTURER	c64audio.com
WEBSITE	c64audio.com
RETAILER	c64audio.com

Last year, some of the greatest music ever produced on a SID chip was celebrated in a live concert in Hull, with orchestral arrangements of music by greats such as Rob Hubbard, Ben Daglish and Richard Joseph. Whether you made it there or not, you can now pick up this double-CD set, which features the Czech Studio Orchestra playing the likes of *Monty On The Run*, *Kentilla*, *Spellbound* and more. As well as the 20 tracks on the CDs, a 32-page booklet features liner notes on the music that will be sure to please fans.

STREET FIGHTER III: THE COLLECTION

MANUFACTURER	Laced Records
WEBSITE	www.lacedrecords.co
RETAILER	www.lacedrecords.co

Capcom's third proper instalment in the *Street Fighter* series was an enormous departure from what had gone before, as indicated by the near-total abandonment of the *Street Fighter II* cast, but it did ultimately gain recognition for its brilliant fighting – though it took some time. Likewise, a new musical approach incorporating elements of jazz, jungle and drum and bass was heard across the three versions of the game. 72 tracks from *New Generation*, *2nd Impact* and *3rd Strike* are found across the four LPs in this collection, showcasing how the game's sound evolved as the fighting action was augmented and refined.

£70.00

MINIATURE CABINETS

DON'T HAVE SPACE IN YOUR HOME FOR A FULL-SIZED ARCADE CABINET? PLENTY OF MINIATURE REPLICAS ARE NOW AVAILABLE FOR YOU TO ENJOY INSTEAD

QUARTER ARCADES

£129.99+

MANUFACTURER	Numskull
WEBSITE	www.numskull.com/quarter-arcades
RETAILER	www.geekstore.com

If you're looking for accuracy and authenticity in your miniature arcade experience, the Quarter Arcades range delivers in style. Each cabinet is shrunk down to a quarter of its original size with meticulous detail, featuring faithfully reproduced cabinet shapes, the correct art on sides, marquees and screen bezels and light-up features just where you'd expect them. Each is also fully functional, allowing you to actually play the classics, and while the controls are accurately scaled down, the experience isn't compromised. Many of the current releases are from Namco – this year's big ones include the *Pac-Man 40th Anniversary* cabinet and *Dig Dug*, with *Galaga*, *Galaxian* and *Ms Pac-Man* in the past – but the range is expanding with the likes of *Bubble Bobble* and *Track & Field* over the coming months.

$119.99

REPLICADE X DRAGON'S LAIR

MANUFACTURER	New Wave Toys
WEBSITE	www.newwavetoys.com
RETAILER	www.newwavetoys.com

Authenticity is the name of the game for the Replicade range, which offers fully playable classic games at one sixth of their usual size, scaled down accurately. A distinguishing feature of the Replicade range is the cool extras that come with the cabinets, such as a tiny model LaserDisc player with remote and disc for *Dragon's Lair*, as well as a replica shipping box and manual. The *Dragon's Lair* cabinet also features TV output and USB controller support, should you desire a big-screen experience. If *Dragon's Lair* doesn't strike your fancy, past releases include *Street Fighter II: Champion Edition* and *Tempest*, and *Asteroids* is next in line, with features varying from model to model. These ship from the USA, so be sure to order in plenty of time.

£49.99

SPACE INVADERS MICRO PLAYER

MANUFACTURER	My Arcade
WEBSITE	www.myarcadegaming.com
RETAILER	www.argos.co.uk

For the more budget-conscious collectors of compact cabinets, the My Arcade range of Micro Players offers less exacting detail, but still allows you to play your favourite classics. Taito's Seventies classic *Space Invaders* is the new release for this holiday season and it's bound to be popular – especially as this one is My Arcade's closest replica to date, with an authentic reflected screen design that allows the lunar landscape background to shine. Other machines in the range include *Contra*, *Elevator Action* and *Ms Pac-Man* – though it's worth noting that some of the earlier machines use home conversions over the original arcade versions. If you hunt around, some of the older ones can be found at quite attractive discounts these days, too – we've seen some for as little as £14.99.

ALSO ON IMPORT

ASTRO CITY MINI

MANUFACTURER	Sega
WEBSITE	sega.jp/astrocitymini/
RETAILER	www.amazon.jp

We're gutted that Sega's diminutive cabinet seems to be exclusive to Japan. 37 games are included, taking in stone-cold classics like *Virtua Fighter* and *Shinobi*, as well as deep cuts like *Dark Edge* and *Ninja Princess*, and TV output and external controller connections are available as well as silly accessories. Beware, though – it's due for release on 17 December, so it might not arrive in time for Christmas.

BEST OF THE REST

FANCY A FIGURINE, OR FEEL LIKE FLASHING YOUR RETRO CRED WITH A FANCY NEW T-SHIRT? ALL THESE THINGS ARE BUT THE CLICK OF A MOUSE AWAY

SPEEDBALL 2 T-SHIRT

£17.99

MANUFACTURER	Seven Squared
WEBSITE	www.sevensqua.red
RETAILER	www.sevensqua.red

If you often find yourself pining for the brutality of the Bitmap Brothers' brilliant future sports game, we're sure you're not alone. You can know for certain if you wear this T-shirt, which bears the image of the game's memorable box art – like-minded souls won't be able to resist commenting.

PLAYSTATION TECH HOODIE

£59.99

MANUFACTURER	Bioworld
WEBSITE	www.bioworldmerch.com
RETAILER	www.emp.co.uk

Get yourself through the chillier months of the year with this hoodie, featuring the PlayStation logo – in its original era colours, of course – as well as a variety of references to the system's 1994 launch in Japan. Note the red zip on one sleeve – it's probably for storing memory cards. Maybe.

MEGA MAN STUBBINS PLUSH

£12.96

MANUFACTURER	Gaya Entertainment
WEBSITE	gaya-entertainment.de/toys-collectibles/stubbins/
RETAILER	store.capcom-europe.com

We wouldn't normally think of *Mega Man* as being the cuddliest gaming hero – he is, after all, a robot and therefore probably quite a metallic sort of chap. But this eight-inch-tall plush toy version is definitely squeezable, which is sure to delight any fan of the blue bomber.

SUPER MARIO 35TH ANNIVERSARY THERMAL FLASK

£17.99

MANUFACTURER	Nintendo
WEBSITE	store.nintendo.co.uk
RETAILER	store.nintendo.co.uk

The word on the street is that it's a special plumber's birthday, and Nintendo has a range of merchandise to celebrate. We like this thermal flask – with Mario throwing fireballs on the side, you'll know to expect some lovely hot tea (or your warm beverage of choice) when you open it up.

FINAL FANTASY VII POLYGON FIGURES

£55.99

MANUFACTURER	Square Enix
WEBSITE	store.eu.square-enix-games.com
RETAILER	store.eu.square-enix-games.com

Even after this year's spectacular remake reinvented the cast of *Final Fantasy VII*, there's a certain charm to the old low-polygon forms of Cloud and the gang. These figures replicate that look, and this box of eight blind boxes gives you a good chance of collecting the lot – there are seven in total to collect.

SONIC TUBBZ

£12.99

MANUFACTURER	Numskull
WEBSITE	www.numskull.com/tubbz
RETAILER	www.segashop.co.uk

Do you need more rubber ducks in your life? Specifically, do you need rubber ducks cosplaying as *Sonic* characters? It doesn't matter if you need them – they're here, answering the age old question: 'What if a scientist produced a hedgehog-duck hybrid?' Guaranteed* to speed up your bath time. (*Not guaranteed.)

PAC-MAN ICONS FIGURINE

£74.99

MANUFACTURER	Neamedia
WEBSITE	www.neamedia.fr
RETAILER	store.bandainamcoent.eu

You'll undoubtedly have noticed that Namco's iconic hero Pac-Man turned 40 this year – and with that in mind, it might be nice to cap off this milestone year with a nice figurine. This 20cm statue is made of hand-painted resin, and will look great in your games room or on your desk.

SPEED

Muscle Ranking: Road To Sasuke

A CHALLENGE FIT FOR A NINJA

» PlayStation » 2000 » Konami

I've always loved televised pseudosports. Ever since I first watched the likes of Hunter and Lightning humiliating the nation's fitness fanatics on *Gladiators*, I've gone for everything from the predetermined pugilism of pro wrestling to the slapstick obstacle course nonsense of *Total Wipeout*. With that in mind, you've probably already guessed that I'm a fan of *Ninja Warrior*, and particularly the original Japanese version, known as *Sasuke* in its homeland. So you can imagine my delight when I discovered that there was a whole series of licensed games based on *Muscle Ranking*, and that its spin-off *Sasuke* was the subject of one of them.

Normally, this sort of tale ends in tears – licensed games are normally duds, especially ones based on oddball nonsports with no genre conventions to lean on. Thankfully, the game actually turned out to be quite good indeed, mostly because Konami developed it. The developer sensibly applied the *Track & Field* template to the game, so each part of the course requires a different set of skills, whether that's button-bashing to build speed or power, or timing your movements along the Spider Walk. It's also quite an attractive late-era PlayStation game, running at a high resolution and capturing the atmosphere of the show well, particularly with its use of signature camera angles.

However, the thing I really didn't expect was the main mode, which allows you to create a character and guide them along the road to the show. You'll have to manage their diet and budget to build their stats in a training regimen composed of minigames, all the while keeping tabs on stress levels. Unfortunately, that's the biggest barrier to enjoying the game – if you can't work your way around a Japanese menu and figure out which meals will help with strength training or reduce your stress, you're going to be stuck playing in Practice Mode. But if you do have the required language skills and you're up for a twist on the old multisports formula, *Muscle Ranking: Road To Sasuke* could be as pleasant a surprise for you as it was for me.

ULTIMATE GUIDE

Skies of Arcadia™

Sailing into a brave new world of charismatic sky pirates, this one-time swashbuckling RPG took to the Sega blue skies and showcased the Dreamcast at its most daringly optimistic

Words by Alan Wen

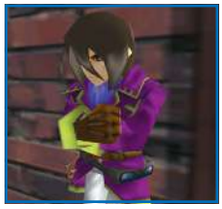
From *Phantasy Star* to the *Shining* series, Sega had its fair share of RPGs but many also sadly failed to travel beyond its native Japan, which seemed more conspicuous once *Final Fantasy VII* finally put Japanese RPGs on the map. The Dreamcast, then, offered the perfect opportunity to correct the course. The console was rife with innovation, from Yu Suzuki creating an all new genre with *Shenmue* to the evolution of *Phantasy Star* as an online RPG, but it was in need of a solid traditional RPG that could rival SquareSoft in having an epic story, unforgettable characters and stylish battles.

» [Dreamcast] The Valuan Empire's admirals are a fascinating bunch, varying from a couple with honourable intentions to the more psychopathic.

Who better to do this than Sega's new division, Overworks, led by veteran developer Rieko Kodama, nicknamed the 'First Lady Of RPGs', having served as director for *Phantasy Star IV* on the Mega Drive and *Magic Knight Rayearth* on the Saturn. Instead of reviving an old franchise, *Skies Of Arcadia* (or *Eternal Arcadia* as it was known in Japan) was an entirely original fantasy world of floating islands and airships inspired by both the Age Of Discovery in 17th century Europe and Studio Ghibli's *Laputa: Castle In The Sky*.

It was also a testament to the Dreamcast's advanced technological power that the whole game was rendered in-engine, a leap from the previous generation where Japanese developers were still new to 3D graphics, resulting in many RPGs either still relying heavily on pixel sprites or prerendered CGI. The story may still rely on plenty of text, with just the occasional voiced sound bites, but you can now clearly see the characters' emotions through their anime-inspired facial expressions.

The story and structure is as traditional as you might expect from the genre: there's a core plot that involves searching for legendary powerful crystals, an evil megalomanic empire, as well as an ancient people with knowledge on secret weapons of mass destruction. The battle system is also very traditionally turn-based, dependent on a rather high random encounter rate that is necessary for earning XP to level up. Selecting each of your party members' actions before watching the whole thing



» [Dreamcast] While Vyse is optimism personified, Lawrence is the more brooding sort, a mercenary who'll join you, for the right price.

» [Dreamcast] First encountered in Valua's slums, Marco is the first of many characters you'll meet to join your crew.

» [Dreamcast] The locations in *Skies Of Arcadia* are richly vibrant and diverse, making each new discovery more fascinating than the last.

» [Dreamcast] Aika's S-moves are useful against multiple enemies, which is one way of getting through random battles quickly.

» [Dreamcast] Your party members might move to attack but positioning is unfortunately something you have little control of in battle.

Blue Rogues Forever

Sail high with these lovable rogues

Vyse

■ **Overflowing with charisma and optimism, Vyse is a natural leader, itching to become the captain of his own ship to see what lies beyond the sunset. Once he's set his eyepatch lens on a goal, no amount of negativity can shake his determination to see it through.**

Aika

■ **Vyse's old childhood friend and partner in sky piracy, Aika is far from your fiery redhead (her fire-based S-moves are nonetheless useful against multiple enemies), she's filled with a cheerful infectious energy that lifts everyone's spirits. Don't expect her to hold back in battle – or against some more unsavoury characters' advances.**

Fina

■ **A mysterious Silvite on a mission to retrieve the powerful Moon Crystals, Fina's isolated upbringing means she's inexperienced with much of the world. After being rescued by Vyse and Aika, she becomes a core member of the party. She also has a cute shapeshifting friend, Cupil, fight alongside her.**

Drachma

■ **The captain of the Little Jack may be an old grump, but beneath his tough mechanical arm lies a tragic past. Hellbent on hunting down the arcwhale Rhaknam, he still cares about others enough to rescue Vyse and Aika early on and then comes to their aid again after abandoning them.**

▶ play out, battles can feel ponderously slow, devoid of a dynamic like *Final Fantasy*'s Active Time Battle system.

There's magic too, which you can learn by attuning different coloured moonstones to your weapons, but aside from learning to heal and revive allies, the rest feels largely obsolete compared to each character's unique and powerful S-moves. These, however, require Focus Points, which are earned each turn or you can also spend a turn building them up, which in turn drags out battles as you spend extra turns just increasing Focus in order to use an S-move next.

» [Dreamcast] A Gigas isn't just a powerful machine capable of wiping out whole civilisations, they're all also stunningly designed.

Ship battles are a bit more interesting in comparison, which have a cinematic sweep as ships pursue and circle each other before firing off cannons and torpedoes. But put the theatrics to one side and they're still slow and strangely one-versus-one turn-based battles, although its battle grid system at least gives you clues on when to attack or defend.

There is, however, much more to *Skies Of Arcadia* that made it a fresh contrast to other RPGs of the time. You play as Vyse, a young Blue Rogue, a faction of Robin Hood-style sky pirates who plunder from imperial ships to help the poor and vulnerable. He's unlike other young RPG protagonists of the time, neither the silent *Dragon Quest* type nor the dark and angsty trope like Cloud or Squall in *Final Fantasy*. Sometimes you get to choose his lines but overall, he's one of the most likable and charismatic characters you'll ever meet. Never one to back down when the going gets tough, at one point saying, "Impossible is just a word to make people feel better when they give up," his pioneering spirit and unwavering optimism underscores the game's overarching theme and tone.

While RPGs have always involved travelling around overworlds and dungeons, *Skies Of Arcadia* explicitly tapped into a sense of discovery, the blank world map slowly filling in as you continue ▶

» [Dreamcast] You can evolve Cupil into a more powerful weapon but Fina's turns are ultimately better spent on supporting her allies.

» [Dreamcast] All sky pirates love treasure, so of course many of your treasure hunts don't have the outcomes you're expecting.

Gilder

■ A dashing gunslinging rogue with a thirst for fights, treasure and women, Gilder may seem carefree but he's also an experienced sky pirate with a loyal crew, taking Vyse under his wing like an older brother. Despite his many flings, his one true love is his ship the Claudia.

Enrique

■ In a bid to atone for his empire's crimes, the Valuan prince joins Vyse's Blue Rogues. He might seem naive and totally unused to sailing, having lived a sheltered pampered life, but he has a strong sense of morals and honour that other nobles in the Empire seem to have forgotten.

Clara

■ You meet other Blue Rogues during your adventure, but none leave quite an impression like Clara. She sails with a female-only crew on a ship that's decked out like a honeymoon suite, pursuing her love Gilder across the skies – he, however, finds her more frightening than the Armada.

» [Dreamcast] Cutlass Fury is Vyse's first S-move and remains a good one for swiftly ending a fight.

» [Dreamcast] There are moments of tenderness between Vyse, Aika and Fina but their friendship is what matters most of all.

» [Dreamcast] Unable to contribute significantly in battle? Then just focus! Unfortunately, it does leave you wide open to attack.

Setting Sail Again

How the GameCube's expansive port unveils new horizons

After Sega exited the console business, many former Dreamcast exclusives found a new life on other platforms, including *Skies Of Arcadia*. A port was originally bound for PS2 handled by US developer Point Of View Software, but it was later abandoned as Overworks decided to instead focus on an expanded 'director's cut' edition for GameCube, *Skies Of Arcadia Legends*.

New side content includes new characters Doc and Maria, who you meet early on and provide Vyse a new eyepatch lens to see and collect Moonfish hidden throughout the game. There's also new discoveries and a 'Wanted List' of bounties from the Sailor's Guild, the latter resulting in a quest where you have to hunt down an imposter who's been tarnishing Vyse's name. The new hardware provides some technical improvements too, though none feel more important than reducing the rate of random battles, while also providing more XP to compensate.

At a glance, the visuals look the same but the one major difference is that character models for the main cast now actually have hands with fingers this time. On the other hand, *Legends* suffers from inferior audio due to the music being ported over using a different audio engine from the Dreamcast version. The result is that some instruments and effects are either missing or poorly simulated. Naturally, some elements that made use of the Dreamcast's VMU had to change too, so the hidden chams needed for upgrading Cupil now have in-game visual and audio hints, though Pinta's minigame is dropped altogether.

There were also plans for a PC port that never materialised. With the game's 20th anniversary just flown past, can we hope for a new remaster? The game's programmer Kenji Hiruta has certainly been vocal on social media about wanting some kind of revival – alas, Sega itself has been silent on the matter.

Ruling The Skies Of Arcadia

Be the best sky pirate you can be

Swashbuckler Rating

■ Different points of the story let you pick what Vyse should say. Answer courageously and your rank goes up, your reputation travelling far and wide. Fighting battles also helps increase the rating, though running away too often will decrease it.

Making Discoveries

■ Journeying to new lands, there's all kinds of landmarks and secrets waiting to be discovered, some in plain sight, some rumoured, others completely unfathomed. Keep an eye on your compass or buy hints from the Sailor's Guild. Don't dawdle though, as you've also got competition.

Aye Aye, Captain!

■ After mopping the decks of the Little Jack and borrowing other rides, you'll finally get to helm your own ship, and it's no less than a new Valuan flagship, the Delphinus, armed with a powerful Moonstone Cannon. You even get to choose what banner your ship can have.

Improve Your Ship

■ You'll naturally find and buy new parts to increase your defence and firepower, but more important are upgrades that allow you to navigate otherwise inaccessible areas. Before long, you'll have a tough hull to break through stone reefs and an engine that lets you reach new heights and depths.

» [Dreamcast] Searching for crystals may be the oldest RPG plot there is but you're also guaranteed an epic boss fight afterwards.

» [Dreamcast] While ship battles are also turn-based, seeing your actions displayed on a battle grid makes them feel more tactical.

» [Dreamcast] As the characters embark on journeys to new lands, Aika's overactive imagination results in some hilarious illustrations of what the party might encounter.

» [Dreamcast] The Delphinus' Moonstone Cannon is so ridiculously powerful you'll want to make sure you have enough Focus to activate it.

Recruit A Crew

■ Once you have the Delphinus, you'll want to get a crew together to keep the ship in good shape, from cooks to gunners who'll improve your stats or grant abilities in ship battles. Look out for friendly faces to recruit, though some will require meeting certain conditions.

Build Your Base

■ While you're alone and stranded the first time there, Crescent Isle becomes a resourceful and remote place to set up a new base for Vyse's Blue Rogues. You'll need plenty of gold but you'll be rewarded with new houses, shops and a fine meeting room for you and your crew.

Fight For Treasure

■ Besides finding the Moon Crystals, you also come across rare treasure in each dungeon, though you'll first have to fight past a pesky bandit enemy called Zivilyn Bane, and they can hit pretty hard. The treasure itself is actually useless but fetches a very good price at the shops.

Pinta-Sized Quests

■ You'll meet Pinta early on at Sailor's Island. Not only does this boy become a crew member, he has his own side journey. These are made up of a few short minigames played on the Dreamcast's VMU. Complete these and you'll get some helpful items in the main game.

your travels. The world of Arcadia is almost analogous to our own, such as how the verdant continent of Ixa'Taka to the west takes inspiration from the indigenous civilisations of the Americas, while the isolated continent of Yafutoma's architecture, clothing and customs is lifted from parts of east Asia. Many of these places are intrinsic to the story but while you might head into more detailed towns and dungeons, the overworld itself is a fully navigable 3D open world of its own for your airship to explore, especially in the case of coming across discoveries.

Just like any traveller, there's a thrill in setting foot on new places but Vyse's Blue Rogues are also on a mission to obtain the Moon Crystals to prevent them being used to awaken the destructive power of the Gigas. That requires journeying to different lands and seeking help from the locals. It's a stark contrast to the Valuans, who embody colonialism and militarism, stopping at nothing to subjugate other nations in a never-ending search for power. There's still kudos and glory for Vyse to make a name for himself in these skies, of course, but where many narratives have a tendency to have exploration go hand in hand with domination of its worlds, there's a strong sense of respect and cooperation with other cultures that runs throughout *Skies Of Arcadia*.

» [Dreamcast] Whoever has the Moon Crystal controls the Gigas – the trick, then, is to go after its master.

» [Dreamcast] It's always exciting setting foot in a new place, even if the people aren't necessarily thrilled by your presence.

Another important aspect, likely attributed to Kodama's involvement, is Vyse's relationship with his two female friends and core party members Aika and Fina. While opposites in terms of appearance and personality, both are strongly written characters who are treated on an equal footing with Vyse rather than romantic interests or damsels in distress, even though you do still have to rescue Fina on a few occasions, while Aika is unfortunately subject to some creepy advances. Yet compared to *Final Fantasy VII*'s love triangle or how many RPGs practically double up as dating simulators, *Skies Of Arcadia* still has one of the most refreshing depictions of a platonic relationship between its male and female characters.

Skies Of Arcadia released in October 2000 to critical acclaim. *GameSpot* praised its world as "some of the most painstakingly detailed ever seen in a role-playing game", while the game is still often cited by critics and fans as one of their favourites on the Dreamcast. However, this never translated to commercial success, though arguably it was down to the Dreamcast's own collapse. By the time the game had its PAL release in April the following year, Sega had already declared that it would be exiting the hardware business.

What a way to go down swinging, though. You can't fault the team for dreaming big and in turn creating one of the largest worlds of any RPG at the time, with a protagonist as inspirational as Vyse. Who knows how things might have turned out had Sega had a leader like him at the helm, who still had the courage to dream.

Overworks would get another chance with a GameCube port, while a sequel had even reached planning stages before the project was put on hold as the team was siphoned off to work on another entry in the *Sakura Wars* series, later merging with another division, WOW Entertainment. Ultimately, *Skies Of Arcadia* would be a one-game wonder of an RPG with just the maiden voyage to its name. But what a bright gem it remains. ✱

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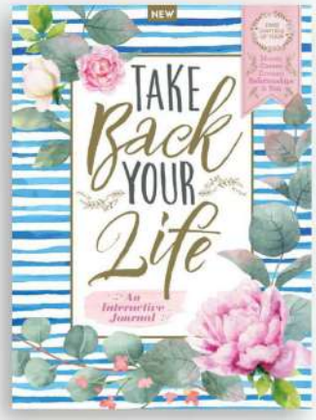

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REINVENTING SILENT HILL

Western-made Silent Hill games are often recalled with blanket derision, but Climax's efforts deserve to be remembered, as the British developer took the esteemed franchise in interesting new directions

WORDS BY ROBERT ZAK

SAM BARLOW

Sam went on to find success as an indie developer with *Her Story* and *Telling Lies*. He's currently working on the mysterious *Project Ambrosia*, and also revealed that he can't talk too much about hypothetical *Silent Hill* projects because he's currently pitching an idea along those lines. Intriguing!

How do you pick up the reins to one of the most unique and auteurial horror franchises of all time? In 2007, British work-for-hire studio Climax found out the hard way, picking up the pieces of a misdirected *Silent Hill* prequel for the PSP before creating a memorable reimagining of the original game.

The *Silent Hill* series was in a strange place in 2005. The sales of each successive entry were worse than the last, and the esoteric vision of Team Silent, the internal Konami team behind the first four games, was at odds with the trend towards more guns-out horror. By the time *Silent Hill 4: The Room* came out, Konami Japan had all but given up on the series, and Team Silent was disbanded.

But over at Konami's US base, buzz around the upcoming *Silent Hill* movie and the reasonable success of a mishmash of videos, music and digital comics called *The Silent Hill Experience* on Sony's shiny new PSP suggested there may be some life yet in the moribund Maine town.

Around this time, long-running British studio Climax set up a Los Angeles office to tap into the lucrative West Coast games business. This move paid off, because by the end of 2005 it had penned a deal to make the next *Silent Hill* game – a prequel to the original *Silent Hill* designed for Sony's portable powerhouse.

This was great news for Climax, putting in its hands an original game in one of the great horror series. However, members of the studio's UK team, which was working on a *Ghost Rider* PSP game at the time, saw fundamental problems with the idea. Sam Barlow, writer and lead designer at the studio, spotted the red flags. "The very idea of making a prequel to *Silent Hill* wasn't good," he tells us. "That game told its story brilliantly through flashbacks, and there weren't really any unanswered questions."

For several months, the UK team remained uninvolved as *Silent Hill: Origins* began forming into an action-oriented *Resident Evil 4*-style game, with an over-the-shoulder perspective that was never a comfortable fit for the PSP's stubby single analog stick, nor for the claustrophobic corridors so synonymous with *Silent Hill*.

The full extent of *Origins*' misdirection was revealed when the LA team came to the UK seeking help. Lead artist Neale Williams recalls the state of the game, "They built all these assets for the game on an engine that never appeared. They got to a stage in development where they were having to show something and just had some internal artwork."

The UK team mobilised quickly, building the armature for a *Silent Hill* game on the in-house

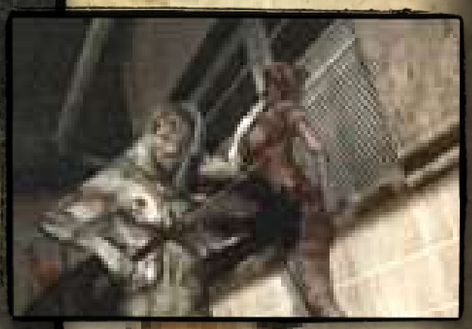
NEALE WILLIAMS

Since *Shattered Memories*, Neale has been lead artist on projects including *Assassin's Creed: Chronicles* and *Planet Of The Apes: Last Frontier*. He had an all-too-brief stint working on indie folk horror title *Winter Hall*, and is currently working on the PC version of the insanely popular board game *Gloomhaven*.

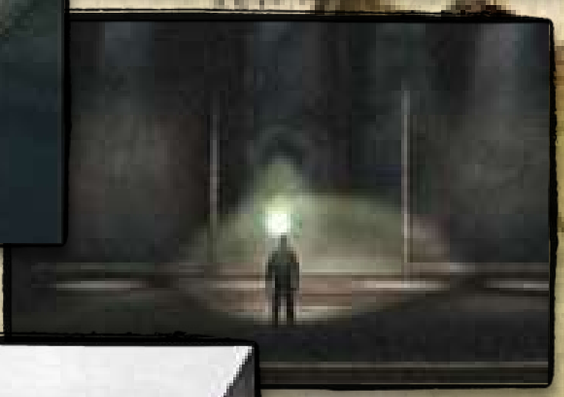
» [PlayStation 2] *Origins*' Artaud Theatre is a fascinating setting, taken over by monsters based on Shakespeare's *The Tempest*.

» [PlayStation] For all its innovations, *Silent Hill* set a series precedent for poor combat, which motivated Climax to drop it altogether in *Shattered Memories*.

» [PlayStation 2] The Butcher was meant to be Pyramid Head's origin story, but Climax UK chopped him down to a bit-part role

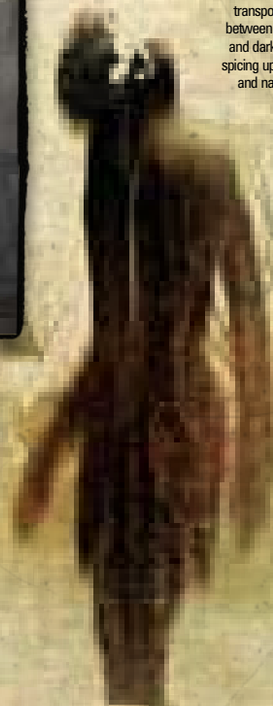


» [PlayStation] The prologue to the original *Silent Hill* was a high point in videogame horror that few games have matched.



» [PS2] Mirrors in *Silent Hill: Origins* transported you between the light and dark worlds, spicing up puzzles and navigation.

» [PS2] Giant Calibans and other meaty monstrosities stalk the streets in *Silent Hill: Origins*.



"THE VERY IDEA OF MAKING A PREQUEL TO SILENT HILL WASN'T GOOD"
SAM BARLOW

REMEMBERING THE ORIGINAL

Why Team Silent's horror classic still stands tall today

By retelling the story of *Silent Hill* through its fascinating narrative of false memories, Climax stuck to its goal of not interfering with the series canon. But amidst all this talk of prequels and reimaginings, it's easy to lose sight of just how important the original game was.

Released in 1999 at the peak of the survival horror boom, *Silent Hill* was lauded by critics and sold over two million copies. But in their desire to find a reference point, many compared it to *Resident Evil*, with *GamePro* magazine even going so far as to call it a "shameless but slick *Resident Evil* clone".

In reality, *Silent Hill* was a different beast, offering a cerebral kind of horror that always seemed too esoteric, too nebulous to become mainstream. It induced dread without the cheap scares, a story without easy explanation and a setting that in its endless fog carried memories and imagery that haunt its earliest visitors to this day.

» [PS2] *Silent Hill: Origins* did a great job of recreating the atmosphere of the original *Silent Hill*, and introduced some creepy monster designs.

» [PS2] Climax UK couldn't drop the final boss fight with the red demon Samael, making it something of a (ahem) necessary evil.

engine it had built for *Ghost Rider*, while showing the LA team how to work with the tools. A demo existed within a couple of weeks and the LA team got back to work, but the gameplay footage shown at E3 2006 raised a lot of creative questions.

"People were saying the monsters looked like something out of *Scooby-Doo*. It didn't look great," Sam tells us. Beyond that, it didn't fit the existing lore or haunting tone of the series. Several characters were older in the prequel than in *Silent Hill*, while enigmatic psychiatrist Dr Kaufmann was suddenly an authority on the ghostly goings-on when in the original game he was still trying to understand everything.

It was shaping up to be more *Evil Dead* than *Jacob's Ladder* (the key movie inspiration for the series). A less-informed studio could have let this tonal shift slide, but as it happened Climax UK was full of *Silent Hill* aficionados.

"At that point, we said to the heads at Climax that we could do a better job. Roughly half the time and money had been spent, the beginning and end cutscenes had been done, and Neale and I wanted to change everything," Sam recounts. "What was a demon bellhop doing in it?"

Sam and the team made their case, and in early 2007 a half-finished *Silent Hill* PSP game arrived at Climax HQ on the shores of Portsmouth. With six months until release, there was no time to completely reinvent the game, so the UK team looked back to the series' roots. The team defied the industry trend towards action horror by opting for semi-fixed camera angles that recreated the

PSYCHOLOGICAL HORROR

HOW CLIMAX'S HORRIFIC CREATIONS TWISTED TO YOUR PSYCHE

One of Climax's most original systems was *Shattered Memories'* psychological profiling system, which tracked your behaviours to change your experience of the game. How you answered the psychologist's questions, how long you spent looking at certain things, like gore and nude calendars, would affect which characters appeared in the game, Harry's behaviour and the endings. But one of the coolest things affected by the psychological profiling were the Raw Shock monsters, which would change appearance depending on your actions.

FEMININE

Spend too much time ogling nudie posters and perving on women's posteriors, and Raw Shocks take on feminine traits like a flesh corset, high-heeled feet and full lips.

DISEASED

If your responses in therapy and behaviours in-game show too much propensity for the bottle, the monsters will look pustulent and bloated with disease.

ABSTRACT

Steer Harry truly towards his goal of finding Cheryl without getting sidetracked or waylaid, and Raw Shocks will take the form of these strangely structured creations.

ATROPHIED

If you spend too much time faffing and showing little urgency to find Cheryl, then you'll get these emaciated and malformed monstrosities on your tail.

intensity of the original game, while letting players switch to a regular third-person view with the press of a button.

Neale and Sam canned the *Scooby-Doo* creations, splitting the work of monster design between them. This led to some of the most menacing creatures in the series: the cow-like Carrion abominations, which drag themselves across the damp pavements due to their front legs being atrophied. Then there was the biggest creature in the series, Caliban, whose behooved legs bent over its head like a horrid hairy pretzel.

Not every idea worked. There were many late nights at Climax, and Sam reveals one of the creatures he conceived during the graveyard hours. "Luckily, Neale was on hand to bring me round when I thought to have the hero Travis' dad represented by a leather chair with a spooky face," he recalls. "I thought it was cool and surreal, he thought otherwise (correctly)."

At Konami's insistence, the iconic nurses made a return, and the game features a Pyramid Head knock-off called The Butcher, who Climax UK had to keep due to his appearance in the marketing assets. "In Climax LA's version, The Butcher was the origin story of Pyramid Head, who was explained as 'a chef who went insane and attached metal to his head'," Sam tells us, while Neale laughs in recollection of the terrible idea.

Climax managed to get rid of the canon-killing backstory for the Butcher, but the character remained, limited to fleeting appearances and a surprisingly easy boss battle – his unceremonial demise perhaps payback from Climax UK for having to feature him in the first place.

Another point of contention was the hero Travis, a trucker with seemingly no connection to Silent Hill. Again, he stayed in the final product for marketing reasons, being the kind of butch hero that games were leaning towards at this time. "The best we could do was ground Travis a bit more, so that all locations had some link to his psychology," Neale reveals.

Throughout all this, Climax didn't have much input from Konami Japan. "This was a thorny PR question at the time because you didn't want to say you just made this stuff up as you went along," Sam admits.

Neale, however, does recall getting a hard drive with a dump of the *Silent Hill 2* database on it. "Much of it was indecipherable, but there were also weird things like work trip photos," he recounts. "There was this weird voyeuristic experience of looking for textures of [*Silent Hill 2* protagonist] James Sunderland only to find pictures of guys sitting in motel rooms in T-shirts and underpants drinking beer."

» [PS2] Typewriters, TVs and hospital equipment were all legitimate weapons for Travis the unloved trucker.

Climax's office was a bright space, which proved to be an unforeseen hindrance during development. "It was this lovely fishbowl studio where the walls were all made of glass and the sun was constantly shining through, while we were making a game predominantly set in the dark on these shiny little screens," says Neale. "We bought big blankets for the team to put over their shoulders when playtesting."

Silent Hill: Origins came out on the PSP in November 2007. While it didn't break new ground, it was precisely the solid *Silent Hill* throwback Climax intended to make. It maintained the series, leaning on the novelty of the PSP to deliver an atmospheric, old-school survival horror well outside the genre's heyday. Crucially, it showed Konami that Climax could be trusted with the *Silent Hill* IP.

To this day, Sam remains proud of the turnaround job the team did on the game. "If people were to ask me, 'What is the achievement you're most proud of in games?' *Origins* might be there just in terms of what the team turned out given those constraints".

Soon after *Origins* and the surprisingly successful movie, Konami approached Climax about a possible sequel. Climax boss Simon Gardner rejected the idea, believing there was little to be gained commercially or creatively from a follow-up. At this point, Konami producer William Oertel stepped in to offer Climax a sweetener: the option to create a *Silent Hill* remake for the Nintendo Wii, provided the studio made a PSP game too.

Climax accepted, and were quickly beset by publisher demands: Konami wanted to emphasise Wiimote melee combat, William wanted a survival-like system that involved scavenging heat-control pills. Climax wanted none of these things, hoping to instead shake up the genre by moving away from combat and violence towards something more subtle and congruous with the *Silent Hill* style. "We made an effort

» [Wii] Unable to fight the relentless Raw Shocks in *Shattered Memories*, you had no choice but to run and hide.

» [Wii] *Shattered Memories* let you interact with the environment and access memories by taking pictures with your camera phone.

> "AT THAT POINT, WE SAID TO THE HEADS AT CLIMAX THAT WE COULD DO A BETTER JOB. ROUGHLY HALF THE TIME AND MONEY HAD BEEN SPENT, THE BEGINNING AND END CUTSCENES HAD BEEN DONE, AND NEALE AND I WANTED TO CHANGE EVERYTHING"
>
> SAM BARLOW

» [Wii] Harry Mason stumbles out of a car crash in *Shattered Memories*, which retells the original game's story.

TRUE ORIGINS

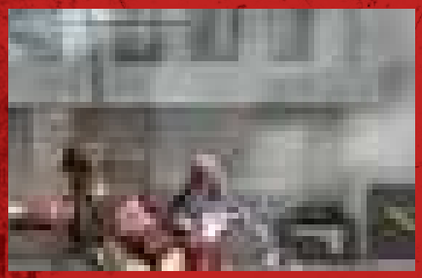
Until Climax UK took over, Silent Hill: Origins was set to be a big departure from the series' canon and tone. Here's how it was salvaged

SAVING PYRAMID HEAD

Climax UK scrapped Pyramid Head's proposed origin story that he was a butcher gone mad. Preserving the mystery and myth of *Silent Hill*'s most iconic creature, the team omitted any reference to Pyramid Head from the game.

NO LAUGHING MATTER

Early in development, *Silent Hill: Origins* was going to be a dark comedy in the vein of *The Evil Dead* (with a bit of *Scrubs* thrown in, according to Sam Barlow). Climax restored the moody tone, though the UK devs did have to keep gilet-wearing trucker Travis as the hero.



RESIDENT EVIL NO MORE

Climax UK completely overhauled the mechanics, moving them away from a *Resident Evil 4* perspective towards something that tonally and aesthetically recalled the original *Silent Hill*. The team got rid of the immersion-breaking UI, too.

▶ to step back from the very blinkered take on horror that originated from *Resident Evil* – the shotguns, crowbars, headshots and resource scavenging – to ask what a horror game should look like," Sam reveals.

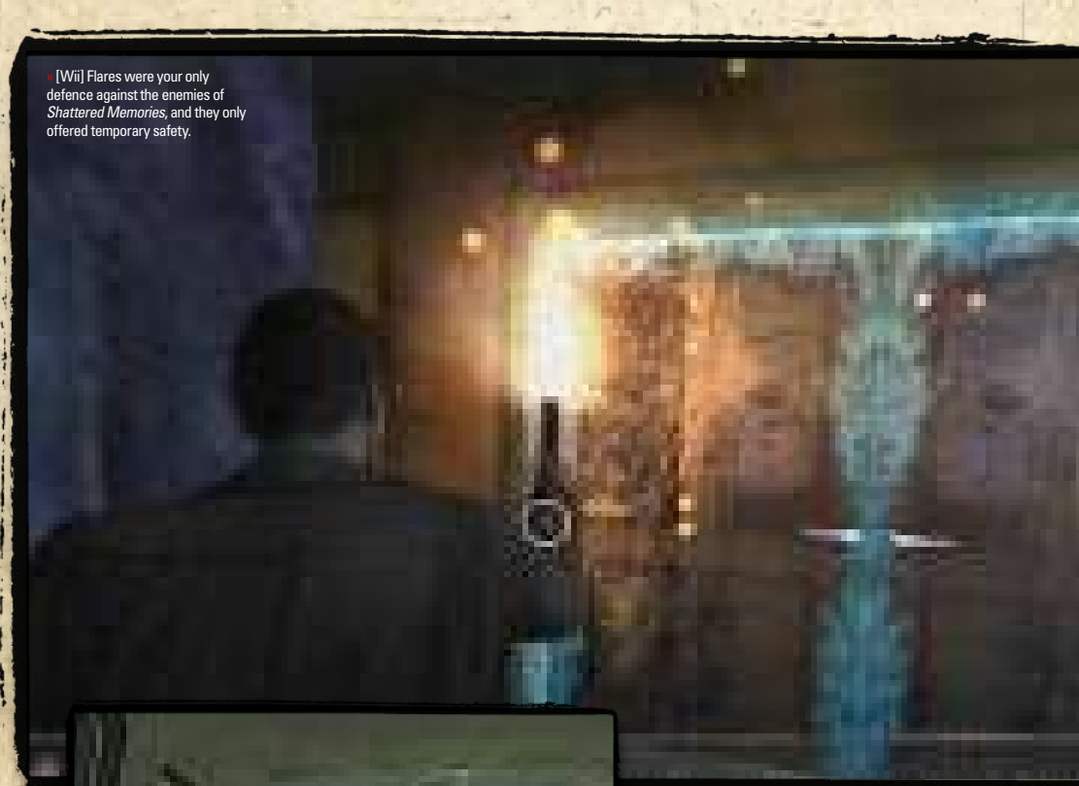
While the foundations of *Silent Hill* are grounded in works like *Jacob's Ladder* and surrealism, Sam also looked to two less likely places for inspiration. "I thought of *Battlestar Galactica*, a reboot in which some characters had the same names but they reinvented everything," he says. "So I said, 'Why don't we do a reboot like that?' This idea of the psychiatrist interviewing the protagonist, the whole game can be a false remembering of something."

The premise of *Shattered Memories* was born. It would retell the *Silent Hill* story of Harry Mason searching for his daughter, Cheryl, following a car crash, but do away with the cult and paranormal activity to deliver a more intimate story. There would still be monsters, but they'd be confined exclusively to the now-frozen Otherworld – a place that, it would transpire, was a manifestation of Cheryl's psyche, not protagonist Harry's.

The second unlikely inspiration for *Shattered Memories* was the slasher horror subgenre. "Slasher movies have this wonderful structure which enables you to build up suspense, anticipation and dread," Sam elaborates. "You have the daytime sequence where no one gets killed – character-building, mystery, investigation – then night falls and suddenly someone is home alone. Now it becomes suspenseful. Then the bad guy jumps out for the fear, adrenaline and chase."

These ideas came together for an uncannily prescient game. In the light world, *Shattered Memories* was a combat-free walking simulator before the genre exploded with *Dear Esther* in 2012. It was eerily relaxing exploring the streets of *Silent Hill* without fear of attack, unfolding the narrative through environmental interactions like taking photos on your camera phone, and puzzles that cleverly utilised the Wii's motion controls. You could snoop through drawers, shake cans with the motion controls to see if objects rattled inside, and textures were clear enough that you could read signs and letters without text pop-ups taking over your screen.

But encounter a harrowing memory and the world would suddenly freeze over. The nocturnal Raw Shocks began stalking you, and you could do nothing but run or hide. Again, *Shattered Memories* anticipated a genre revolution before it began (this time the fight-or-flight horror popularised by *Amnesia: The Dark Descent* in 2010). Hiding in lockers and watching through

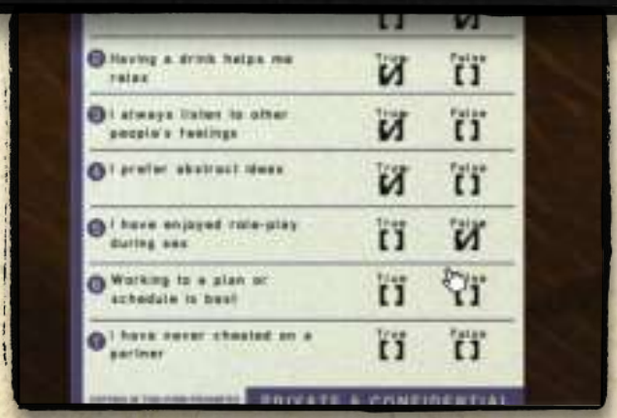


› [Wii] Flares were your only defence against the enemies of *Shattered Memories*, and they only offered temporary safety.

» [Wii] *Shattered Memories* shifted between third and first-person perspectives, letting you appreciate the detailed environments up close.

» [Wii] The only enemies in *Shattered Memories* were these speedy creatures – a departure from *Silent Hill*'s traditionally slow, shambling monsters.

» [Wii] Hiding in a locker and staring through the slats at your pursuer foreshadowed *Alien: Isolation*, released five years later.



» [Wii] Dr Kaufmann presented you with uncomfortable questions in his psychological evaluations (and no, those obviously aren't our real answers).

» [Wii] The over-the-shoulder peek was one of countless clever mechanics introduced in *Shattered Memories*.

the slats as fleshy, squealing creatures scurried by foreshadowed the locker-cowering of *Alien: Isolation* five years later.

With *Isolation* developer Creative Assembly's offices being under an hour's drive from Climax, Sam believes the connection might not have been coincidental. "If you make a game like *Shattered Memories* that's not necessarily a huge hit, on the Wii, it's the perfect game to take inspiration from – a cool game that wasn't played much," he suggests.

Shattered Memories was an anomaly on every level; on the Wii where it was surrounded by family-friendly games, in a horror genre that leaned into action, and even within the *Silent Hill* series itself, untethering it from the awkward combat that Sam and Neale felt was dissonant with its wider vision. The fact that in earlier games it became a widely accepted strategy to simply slalom around the enemies revealed the flaws of the system.

But to omit combat completely, Climax had to use a bit of cunning. Producer William Oertel was insistent that Konami wanted motion-control combat, letting players physically flick at monsters with their Wiimotes. However, when William was fired late in development, Climax pounced on the one-day transition between producers to enact their vision.

"In one afternoon we took the design docs, removed all the bits we didn't like – the temperature pills, the combat – and uploaded the document the next day," Sam recalls. "The new producer turned up the next day and told us what we were doing was very ambitious. We just said, 'Yep, that's what's been signed off!'"

> "THE NEW PRODUCER TURNED UP THE NEXT DAY AND TOLD US WHAT WE WERE DOING WAS VERY AMBITIOUS. WE JUST SAID, 'YEP, THAT'S WHAT'S BEEN SIGNED OFF!'"
> SAM BARLOW

***Shattered Memories'* dichotomy between melancholy light world and vicious dark world was punctuated by Akira Yamaoka's score – the only contribution to the game by an original Team Silent member.** While Climax was delighted with the work he did, limited communication led to some strange misunderstandings.

"At this point, he was very into vocal tracks. He had a guy in LA who would write the lyrics for the music," Sam remembers. "We sent him very specific briefs. The first track he sent back, the lyrics went something like, "Why did you have to die in that car crash daddy. I've been screwed up ever since.'" While *Shattered Memories* would contain more vocal tracks than previous games, the more on-the-nose ones were reeled in.

Through the team's focused creative vision, Climax made the game it wanted, while a separate PSP game was scrapped for budgetary reasons, replaced by a PSP port of *Shattered Memories*. But this was a Wii game by design, and possibly the most complete use of the console's technology – from answering phone calls and hearing the radio static of enemies through the Wiimote speaker, to taking photos and shaking off enemies by flailing the controllers. Not to mention the incredibly ambitious psychological profiling system (see boxout).

Konami demanded a PS2 port of *Shattered Memories*, which was never going to show the game in its best light. Nevertheless, it was aimed at South America where the PS2 was still popular, and proved to be a hit. "To this day, whenever I have conferences in South America I have people wanting me to sign their copies of *Shattered Memories*," Sam says.

The popular thinking is that the 'true' *Silent Hill* ended after Team Silent disbanded. But amongst the dodgy dungeon crawlers, Pachinko machines and other misguided takes on the series, Climax's efforts stand tall. *Silent Hill* is, after all, a subjective place – a setting where the tangible reality of a sombre East Coast town makes way for a nightmare of symbolism and interpretation. Climax understood where the series came from and returned there with *Origins*, only to then take *Shattered Memories* to a place where videogame horror hadn't quite gone before. ✱

SPELUNKY® 2

By delving deep below the surface with his subterranean hit, Spelunky, Derek Yu found gaming gold and spawned a whole string of likeminded titles. With Spelunky 2 now released, Derek reveals its origins and proves that sometimes, less is definitely more

Words by Darran Jones

IN THE KNOW

- **PUBLISHER:** MOSSMOUTH
- **DEVELOPER:** MOSSMOUTH, BLITWORKS
- **RELEASE:** 2020
- **PLATFORM:** PS4, PC
- **GENRE:** ROGUELIKE

***Spelunky* was a fantastic, and rather brutally difficult, surprise when it arrived at the tail end of 2008.** Mossmouth's game placed you in the boots of an intrepid explorer (later named Guy Spelunky) who delved into procedurally generated caves in search of treasure and other goodies. Designer Derek Yu took inspiration from a variety of diverse titles, including *Super Mario Bros*, *Spelunker* and the platformer genre in general, and *Spelunky* became so popular that he had the opportunity to create an enhanced edition of the game, initially for the Xbox 360 in 2012, and then later for other systems, including PS3, PS Vita and PS4.

He's now back, 12 years after he delved into the caves, and fans will be pleased to know that while *Spelunky 2* is very much business as usual, it also has clever new surprises to keep veterans on their toes. "I had some ideas for *Spelunky 2* right after we released *Spelunky* on Steam, but I didn't think about it seriously until I started writing my book about the game," Derek tells us, referring to *Spelunky*, which is published by Boss Fight Books. "It was writing the book that really made me want to do a sequel, since I had to reflect a lot on *Spelunky*'s development during that time. It wasn't long after that when I reached out to BlitWorks and Eirik Suhrke about working on it together. Thankfully, they were excited, too!"

» Derek Yu's original *Spelunky* was a big influence on the roguelike genre.

» [PC] Get this cute dog to safety and your reward will be a loving lick that will restore one heart of health.

Both partnerships made perfect sense to Derek as he'd already worked with musician Eirik for the first *Spelunky* and had also partnered with BlitWorks for various ports. "They had the engineering power that was required to properly expand the game, and they also had the familiarity with the first game, having done the ports to PlayStation," he says. *Spelunky 2*'s familiarity continued, not just with the teams chosen to work on the game, but in its actual structure. Despite numerous enhancements, *Spelunky*'s sequel still feels very similar, to the original, although Guy's daughter, Ana, is now doing the exploring. Derek tells us he wanted, "A huge expansion of the original game and a continuation of the story, but not a fundamental shift. 'How far can we push the original game's ideas?' I wasn't interested in making changes just for the sake of being different!"

As a result, the changes that feature in *Spelunky 2* feel meaningful and well-thought-out. They easily enhance the core exploration aspect of the original game, with a notable addition being *Spelunky 2*'s mounts, helpful fauna that will make your underground stay that little more manageable. "The idea

» [PC]Mounts are a lovely addition to the game and are useful for navigating tricky areas.

» [PC] Avoiding lava becomes a lot tougher when the lights go out. Best grab a torch.

» [PC] You can buy helpers to tackle monsters, or if you're lucky, unlock them instead.

» [PC] There are numerous multiplayer modes in *Spelunky 2*, with the game catering for both co-operative and competitive play.

for mounts came from wanting to add some friendly animals to the game, since all the wildlife in *Spelunky* is trying to kill you! In practice, they're like temporary power-ups." As with anything in *Spelunky 2*, using a mount isn't straightforward, as you need to first leap onto its back and survive a wild ride until it's tamed. Once under your control, riding a mount will let you survive hits from traps and give you extra abilities, so mounting a turkey lets you glide, while jumping on the back of a rock dog gives you immunity to fire, and so on.

While experimenting with *Spelunky 2*'s mounts are a big change, they're certainly not the only enhancements Derek has made. "There's a lot!" he proudly tells us. "Overall, the world is much more of a living, breathing place. Some of the new features are really big, like multilayered levels where you can go behind the background, or the new fluid dynamics. But I think all the new details we added are just as important; for example, there are a lot of subtle and interesting ways that items, traps and monsters can interact with each other in *Spelunky 2*." Another big change for Derek's sequel is its expanded focus on multiplayer, which adds numerous online modes in addition to local play. "Co-op was our version of an 'easy difficulty' in *Spelunky*," he tells us. "It was a great way to naturally make

» [PC] The great thing about *Spelunky 2*'s procedurally generated levels is you never know what you'll encounter.

Places
DWELLING
JUNGLE
The air here is warm and dry. It smells of campfire smoke and bat guano.
Despite all odds, this dense, tropical forest appears to be teeming with life.

» [PC] In addition to telling *Spelunky 2*'s backstory, the journal also records everything you discover.

the game easier, and I heard lots of stories about families and couples playing the game together that way. Deathmatch was also a fun way to let off some steam between runs. So when it came time to make a sequel, it was only natural to expand multiplayer as well. Not to mention that one of the big themes of *Spelunky 2* is community!"

Even though some may feel that *Spelunky 2* is an expansion rather than a full-blown sequel, there's no denying it's another beautifully polished adventure that will delight as much as it infuriates. There's also no denying the sheer amount of time it has taken Derek and BlitWorks to create *Spelunky*'s challenging sequel, although Derek admits that there was no specific technical hurdle to clear during development. "*Spelunky 2* took about four years to create," he explains. "It's hard to pinpoint one single technical challenge that gave us the most trouble. We did spend quite a bit of time making the liquid perform well, but also look nice, and online multiplayer is almost always a tricky problem, even for an experienced studio like BlitWorks. I'd say the biggest challenge was simply the size of the game and the sheer number of moving parts. It could easily take hundreds of runs to see all of the work that we did over those four years."

It could possibly take that much time to discover all of *Spelunky 2*'s backstory as well, as Derek has been quite clever with how it's revealed, resorting to using journal pages that the player can pick up in order to find out more about the moon Ana explores as she searches for her missing parents. "*Spelunky* has always been more about the stories that players create, so I wanted to make sure we were supporting those stories and not interrupting them with our own," concludes Derek. "The story in *Spelunky 2* is more like a backdrop over which players can write their own tales through play. So aside from a few short cutscenes, I felt like it was best to use the journal to tell them about the world of *Spelunky* and its characters." ✱

HOW HARD?

DEREK YU ON MANAGING SPELUNKY 2'S DIFFICULTY

***Spelunky 2* might look cuter than a sackful of kittens but a savage difficulty lurks under its cheerful exterior.** That toughness is intentional, of course, but just how tough is it to knowingly make a hard game, and how difficult is it to achieve that balance when your game is procedurally generated? "Random level generation means that there are tons of possibilities, so it's helpful to design interactions to be more general-purpose," explains Derek when we quiz him about walking this difficult tightrope. "If something affects one monster, for example, it should affect all monsters (and maybe items, too). That's an aspect of traditional roguelikes that I really love that I wanted to bring to 'action roguelikes' when I first created *Spelunky*."

Playtesting also plays an important part, and Lollipop Robot was drafted in to help fine-tune *Spelunky 2*'s difficulty. "They tested the game throughout most of development and would point out when the game felt unfairly difficult or if an exploit was too easy," Derek continues. "Their input was really valuable, given how large the game ended up being. In general, though, I'm not really interested in perfectly balancing difficulty, especially in a randomly generated game like *Spelunky*. What matters more to me is that the player is having an interesting experience that they'll remember for a long time. Difficulty is more like a vehicle for that."

MIKE ARCHER

Having attended pro wrestling school as the wrestling business exploded in the mid-Nineties, Mike Archer was uniquely positioned to not only handle Acclaim's wrestling licences, but steer WWE's very own games division

Words by Hareth Al Bustani

Born in Long Island, Mike Archer fell in love with pro wrestling at a young age. A brilliant athlete, having played baseball and football at Mercy College, he went on to join Johnny Rodz's pro wrestling school. Despite making some life-long contacts and friends, he found training incredibly gruelling and decided to move on.

After responding to an ad in the New York Times, he landed a job as an analyst at the emerging videogame powerhouse, Acclaim. Within eight months he was made an executive producer and was handed control of the company's wrestling licences. Six years later, he joined WWE, where he handled licensing, product development and consumer goods for an incredible 15 years. Having left the company, he is currently working on the upcoming retro-style wrestling game, *RetroMania*.

» Having attended a wrestling school before joining Acclaim, Mike Archer was uniquely suited to manage the company's wrestling licences.

What were your main passions growing up?
I was born in Lindenhurst, Long Island, and I always found solace in sports. When I was around ten years old, I discovered professional wrestling – this was back in the day when wrestling was 'real', or as 'real' as we thought it was. It was always a constant in my life, and I actually played baseball in Division 2 at Mercy College.

After graduating college, you joined Johnny Rodz's pro wrestling school – what was that like?
I graduated when I was about 21 or 22, and I don't know if anybody wants to say it, but everybody wants to be like Hulk Hogan, and then you take your first wrestling 'bump' and you go, 'Oh, wait a second.' I'd been through college baseball and football, some really gruelling sports, but it's just nothing compared to what you go through. They would say, 'You've got a three-minute match,' and you go like, 'Three minutes?' And then by three minutes in, you were on your hands and knees… you couldn't breathe. That's how I met Tommy Dreamer, who later in life would come back to help me get the ECW (Extreme Championship Wrestling) licence. I'd never call myself a 'wrestler' though, it was so hard to do.

How did you go from wrestling school to joining Acclaim Entertainment?
I answered an ad in the New York Times, which was how you used to get jobs. There was this ad in the Sunday classified ads, and you had to love wrestling and sports – it was almost like it was written for me. I went in and a week later I got called back. There's a certain point in your life where things just click. I had some incredible bosses, some super-talented people around me, and I learned a lot quickly. Gaming was at its very early stages – nowadays, when you're 23 or 24 you're a baby, but I felt like I was the old man trying to figure it out. But I had these two passions, wrestling and baseball, and before you know it, videogames became a passion, too.

Did you have any programming experience before you joined?
No, I learned while I was there. You have to remember it was early days, so when I first started at Acclaim, I didn't even have a PC on my desk. You tested for bugs, you wrote things out longhand and then you typed it up afterwards. The programming and heavy coding was done with the developers; I could never be knee-deep in coding, but I could see from the top-down, where we were going. Although I wouldn't say I was the most technically sound, it was more about management structure. I saw the whole product, timelines, budgets, marketing, PR, sales, anything I could do to help.

How long did it take to learn the ropes?
My first job at Acclaim was an analyst, so I was testing games. You name it, I tested it – *Maximum Carnage* and all the Marvel products, *The Simpsons*, it was a lot of fun. It was just a great place – good people, smart people, creative people, and it allowed me to grow at a rapid rate.

The first big game you associate-produced was *WWF Raw*. What was that like?
This was right when WWE started to really blow up. We knew it was an evergreen title – if you look at all of the machinations of the WWE, they were on every Monday night, they had pay-per-views, they had house shows and things like that. This was before we got online, so I kind of came in and when people asked about it, I was like, 'Yeah I have a background in it.' Eight months in, they promoted me to associate producer and they said, 'You're now in charge of all wrestling titles,' which was wonderful, and awesome, and scary. I learned fast and it moved fast. I'm coming in and trying to figure out how to get ▶

You have to remember, it was early days, so when I first started at Acclaim, I didn't even have a PC on my desk. You tested for bugs, you wrote things out longhand and then you typed it up afterwards
Mike Archer

SELECTED TIMELINE

GAMES

- **WWE 2K15** [2015] VARIOUS
- **WWE IMMORTALS** [2015] IOS, ANDROID
- **WWE 2K14** [2013] PS3, XBOX 360
- **WWE 13** [2012] PS3, XBOX 360, WII
- **TUROK** [2015] VARIOUS
- **WWE ALL STARS** [2011] VARIOUS
- **WWE SMACKDOWN VS. RAW 2011** [2010] VARIOUS
- **WWE SMACKDOWN VS. RAW 2009** [2008] VARIOUS
- **WWE SMACKDOWN VS. RAW 2008** [2007] VARIOUS
- **WWE SMACKDOWN VS. RAW 2007** [2006] PS2, PSP, XBOX 360
- **WWE DAY OF RECKONING 2** [2005] GAMECUBE
- **WWE SMACKDOWN VS. RAW 2006** [2005] PS2, PSP
- **WWE SMACKDOWN VS. RAW** [2004] PS2
- **WWE SMACKDOWN! HERE COMES THE PAIN** [2003] PS2
- **WWE SMACKDOWN! SHUT YOUR MOUTH** [2002] PS2
- **ECW HARDCORE REVOLUTION** [2000] DREAMCAST, N64, PLAYSTATION
- **ECW ANARCHY RULZ** [2000] DREAMCAST, PLAYSTATION
- **NFL QUARTERBACK CLUB 2000,** [1999] DREAMCAST, N64
- **RE-VOLT** [1999] VARIOUS
- **TUROK: RAGE WARS,** [1999] N64, GAME BOY COLOR
- **WWF ATTITUDE** [1999] DREAMCAST, N64, GAME BOY COLOR
- **ALL-STAR BASEBALL 99** [1998] N64, GAME BOY COLOR
- **BATMAN & ROBIN** [1998] PLAYSTATION
- **JEREMY MCGRATH SUPERCROSS 98** [1998] PLAYSTATION
- **TUROK 2: SEEDS OF EVIL** [1998] GAME BOY COLOR
- **TUROK: BATTLE OF THE BIONOSAURS** [1998] GAME BOY
- **WWF WAR ZONE** [1998] N64, PLAYSTATION, GAME BOY
- **THE FANTASTIC FOUR** [1997] PLAYSTATION
- **BATMAN FOREVER** [1995] VARIOUS
- **JUDGE DREDD** [1995] VARIOUS
- **SPIDER-MAN [1995]** MEGA DRIVE, SNES
- **FRANK THOMAS BIG HURT BASEBALL [1995]** VARIOUS
- **VENOM • SPIDER-MAN: SEPARATION ANXIETY [1995]** GENESIS, SNES, PC
- **WWF WRESTLEMANIA [1995]** VARIOUS
- **SPIDER-MAN / X-MEN: ARCADE'S REVENGE [1994]** MEGA DRIVE, SNES, GAME BOY, GAME GEAR
- **WWF RAW** [1994] VARIOUS
- **SPIDER-MAN** [1994] SNES
- **SPIDER-MAN / VENOM: MAXIMUM CARNAGE** [1994] MEGA DRIVE, SNES
- **WOLVERINE: ADAMANTIUM RAGE** [1994] SNES, MEGA DRIVE
- **VIRTUAL BART** [1994] MEGA DRIVE, SNES

» [SNES] Mike says producing videogames based on beloved IPs is "all about authenticity".

Raw out of the door, and then you look at the schedule and see there's another WWF game, *WrestleMania: The Arcade Game,* coming at you.

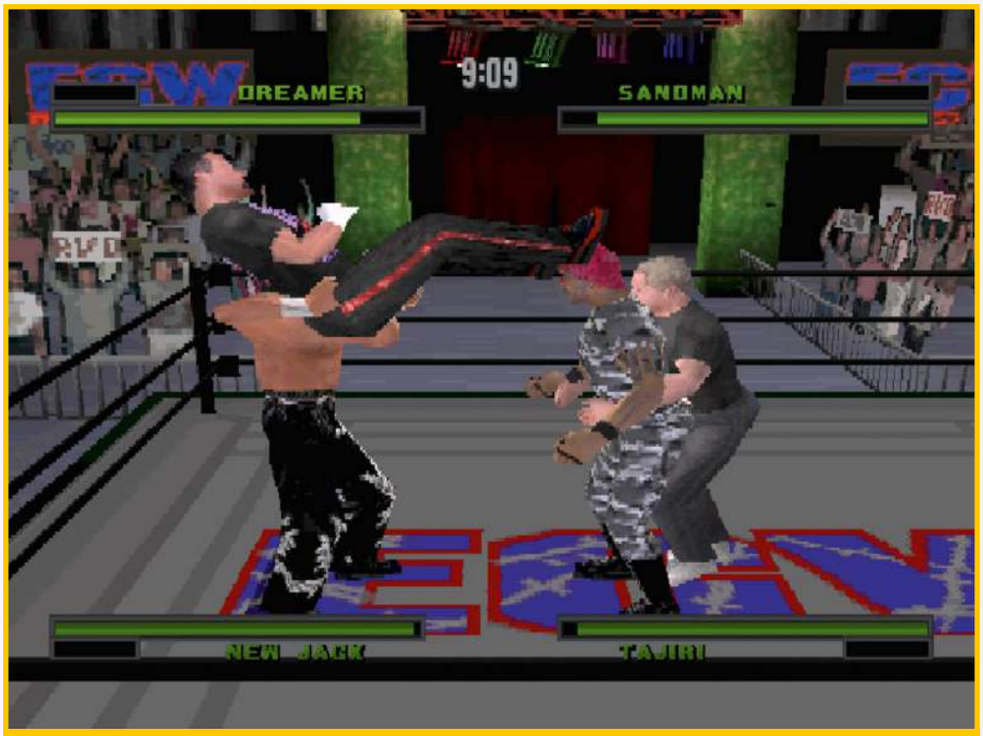
> "Guys would go to the room and sleep, and then another guy would wake you up, tag in and tag out. But it never felt like a gruelling job"
> Mike Archer

Is that when you began building in-roads with WWE?
Yeah, you kind of had to because you were trying to keep them as up to speed as possible. There wasn't a lot of verbal contact – you would write something out, put it on a video tape, hand it to the licensing person and then they'd send it up and we'd get comments back. I just started going there in person. WWE is always evolving, so you really have to be ahead of their game, you really need the inside people telling you, because you can start a game and it's all blood and guts, only for WWE to go, 'No, we're going PG,' and you've just spent eight months on that.

WWE must have appreciated having someone at Acclaim who understood pro wrestling…
Understanding is one thing, appreciating is another. A lot of the people nowadays who read the internet understand the inner workings – that's not where I was coming from. You have to look at what they do as an art form, and appreciate the fact that they just want to go out there and entertain people. I don't know one person who doesn't appreciate passion and creativity, and pro wrestlers, or sports entertainers, embody that.

What was it like working with Acclaim's legendary Black Team?
We were growing at such a rapid rate. There was an office building in Oyster Bay, and then from there it just started to grow, so we had people stationed upstairs from a Build-A-Bear workshop, and we had people at a Sons Of Italy (an Italian-American society) – any kind of space we could get. So, we took a house across the street from the office building, which was for the Black Team – we called it 'The Love Shack'. I had a bedroom where I worked, and I had two other producers in there, and the analysts were in another bedroom. It sounds funny now, but it was awesome. We spent a lot of time there, we worked around the clock. Guys would go to the room and sleep, and then another guy would wake you up, tag in and tag out. But it never felt like a gruelling job – when the project was submitted and it started replication, you could go home and get your R and R.

What was the secret to successfully developing licensed games?
At the end of the day, it's about authenticity. If you're making a product, especially if it's a licensed IP, and



» [PlayStation] Mike liaised with his old wrestling school mentor, Tommy Dreamer, on ECW's first two videogames.

MAGIC MIKE

Five classics from the wrestling maestro

SPIDER-MAN / VENOM: MAXIMUM CARNAGE

■ After leaving wrestling school, Mike joined Acclaim as an analyst and tester. *Maximum Carnage* was among the first games he ever worked on. Although Mike wanted the game to be perfect, he learnt that sometimes you just have to get the game out the door: "Nobody's going to pick up if one pixel's out of place."

WWF RAW

■ After just a brief stint of eight months working at Acclaim, Mike was promoted to an associate producer role. Thanks to his pro wrestling background, he was handed control of all wrestling titles the company had on its slate. Although 1994's *WWF Raw* was the first wrestling game that Mike worked on, it would by no means be the last.

WWF WAR ZONE

■ Mike was "blown away" by *Power Move Pro Wrestling* from Japanese wrestling specialist studio Yuke's, which featured 3D graphics. Desperate to stay ahead of the technological curve, Mike decided Acclaim's next WWF title had to adapt with the times and dump sprites. The groundbreaking *War Zone* was WWF's first 3D title, ushering in a new age of wrestling gaming.

ECW HARDCORE REVOLUTION

■ After 1999's *WWF Attitude*, WWF took its licence to THQ. Eager to replace it, Mike called his old friend Tommy Dreamer, a wrestler at ECW who was looking for a company to make a game for his promotion. Mike not only helped get THQ to drop the ECW licence, but beat some stiff competition from Take-Two to win it for Acclaim.

WWE 2K14

■ When THQ went bankrupt, Mike was handling WWE's licensing and product development. Within two months, he'd already found a new publisher, 2K, which continues to publish the company's games to this day. Having risen to the top of the wrestling food chain, he left two years later, in search of a new challenge.

it's not authentic and you alienate the fans, you've just cut 50% of your sales. You had to be sure that you could do it, and if you couldn't do it right, it was better not to do it at all.

Was it more of a challenge producing a huge movie tie-in, like *Batman Forever*?
Everything had to be signed off. At the time, it might have been Warner Bros doing the movie, but you also had DC Comics, so you had two masters to get approval from. You just made sure they were as informed as humanly possible; you want that licensor's approval, and you want them to know everything but you can't just inundate them. As you get closer to turnover, 'a bug' could be considered something that the licensor didn't approve – it might be a crash bug, or you missed a Sony guideline. Or maybe DC didn't like the way Batman's cape moved – there were a lot of buckets you had to hit at once.

What were some of the biggest challenges to producing such high-level licensed games?
When we used to get close to turning a game over to the first party, the team would fix a bug, but then you play it and end up creating another one. People were just tired and burned out, and a lot of the time you would just say, 'Listen, go back three iterations, that was the strongest code we had.' Because technology was moving so quickly, it was impossible not to learn. In the beginning, when I first started it was bitmap, and everything was hand-drawn and keyframed, and then my next game a year later was Ultimate Studio (blue-screen technology), and the year after that it was motion-capture technology, so you had to learn on the fly.

How hard was it keeping up with those technological developments?
Back in the early days of the first console transition, we jumped off really quick – probably too quick – and then the second time around, we stayed too long. It's impossible to try to figure out. If you have the revenue and you have the cash, it's best to kind of stay with the [platforms] where there's an install base, while creating for newer ones – and somewhere, maybe two years in, you hand off the baton and you go. That's a hard thing to budget for creatively and monetarily – because you can make the greatest PS5 game ever, but if nobody bought that system, it's not going to sell.

***WWF War Zone* was WWE's first ever 3D title, how did that come about?**
As we were making *In Your House*, Yuke's had come out with *Toukon Retsuden* (*Power Move Pro Wrestling*), and it blew my mind. This was around the time when *Virtua Fighter* had just hit, and nobody had seen that type of motion-capture movement, and you just could feel the inertia. I remember during the planning stages saying we needed to slow down on production of a sequel to *In Your House* and start preparing for the long haul. I got a room full of Acclaim's best minds, some of the biggest hitters in there, and I said, 'Look, we can't take a knife to a gunfight anymore.' Things were changing and they were changing fast. I mean, if you look at *War Zone* now, I don't know if it holds up, but back then, when we saw the entrances, and some of the motions and moves, it was awesome.

Who did you use for the motion capture?
We did all of the motion capture at Acclaim's studio in Glen Cove. We brought in Justin Credible and Dr Tom Prichard, and they went through probably about six or seven days of eight-hour motion sessions, where they would fall on crash pads, and it was gruelling for them. One thing I didn't realise was that I should have probably had four or five guys there, because pounding one after the other took a toll on those poor guys. It wasn't like they were working in the ▶

» [PC] The official sequel to the arcade classic, *WrestleFest*, Mike's upcoming title, *RetroMania*, pairs old-school retro charm with accessible gameplay.

» [N64] Mike's position at Acclaim gradually grew into more of a marketing, licensing and sales role, naturally allowing him to make inroads at WWE.

» [SNES] When working on a movie tie-in like *Batman Forever* "with a ton of marketing attached to it", it's all about "hitting that beat".

LEGEND QUEST

MIKE REVEALS WHY THE WWE DECIDED TO REVISIT ITS PAST

What was it like handling WWE's consumer goods?

Action figures and videogames made up about 90% of our revenue from consumer products. We had to write guidelines and say, 'Look, you never show this guy wearing this.' There were times where you'd just signed a new licensee in South Africa, and you're telling them what happens and then they come back with zero sales and say, 'Yeah, well black T-shirts don't sell here, you need to wear pink,' and you're like, 'Yeah, but Stone Cold Steve Austin…'

How did the WWE Legends brand begin?

Jeremy Padawer, who worked at [the toy manufacturer] Mattel for years – he was the inspiration for the Legends programme. When I started at WWE, it was a big rule not to sell the past. But we had started to plateau, in terms of how many Stone Cold Steve Austin and The Rock action figures you could make, and Jeremy got us on the right day. Letting Mattel have a little more than the current roster made my life more interesting than I would have liked, because we didn't really have Jumpin' Jim Brunzell's rights – we had to go and acquire those rights.

How did you choose which Legends to bring back into the WWE?

When we first started, our biggest Legends talent were Roddy Piper, the 'American Dream' Dusty Rhodes, The Million Dollar Man Ted DiBiase, Jake 'The Snake' Roberts – the case study on those guys coming back, and seeing the royalties that were accrued led the way. We could have failed miserably – people might be like, 'I don't know who these people are, why would I want a Junkyard Dog action figure?' But because WWE's Hall Of Fame and WrestleMania had such a positive vibe, you could draft someone just on seeing them being inducted into the Hall Of Fame.

Who was the hardest estranged talent you convinced Vince McMahon to sign?

Every year we asked the boss about 'Macho Man' Randy Savage and he'd say, 'No, but ask me again next year.' One year, we were getting ready to make a game and we went up and he said, 'Yes, it's time.' I remember THQ had a press event in the city and they rolled out the video, and when Randy's music hit, everybody went bonkers. *Ultimate Warrior* was another good one – that was handled through 2K. At SummerSlam one year, I went and I got Warrior at his hotel room and brought him in. We went under the garage and he met with the boss and Triple H, and then a few weeks later, boom.

» [PlayStation] Mike was disappointed when Acclaim lost the WWF licence, because he felt there was so much more potential.

» [SNES] One of Mike's earliest forays into videogames was as an analyst on 1994's *Virtual Bart*.

ring, so the programmers had to be on-site to walk through it. We never let it get too crazy, but there were a few moves we shouldn't have done, because back in the day if you asked a talent, 'Can you pull this off?' They'd say, 'Yeah,' even if they couldn't.

Did *War Zone* feel like a landmark title?

It definitely did. *War Zone* was the main voyage and you could see the iterations get cleaner, stronger and faster as we moved forward. When *WWF Attitude* came out and we found out the licence was leaving, that was a crushing blow because I knew we had just scratched the surface of what we could do. And the wrestling business was on fire – you couldn't walk down the street without seeing a Stone Cold Steve Austin shirt, an NWO shirt or an 'EC F'N W' shirt.

But you immediately scored the ECW licence – how did you manage that?

At the time ECW was being courted heavily by Take-Two, and it was one of those things where we had to move fast, so I called Tommy Dreamer. He was his usual open and honest self, and he said, 'We're about to do a deal but you're a friend, so I'll let you come and state your case.' So, the head of Acclaim and myself went to the Freeport Rec Centre, where ECW was putting on a show that night. We met with Tommy and Paul Heyman in an elementary school cafeteria and we hammered it out.

ECW boss Paul Heyman had a pretty notorious reputation – what was it like working with him?

It was a great partnership, because they were very into the brand and ECW was just getting hot. It wasn't just a licence, we actually put some money into the company, we worked hand-in-hand together. I'm not saying there weren't some hiccups, there always are, but in the end the games sold very well – I made two of them, *Hardcore Revolution* and *Anarchy Rulz*. And it was different – there weren't a lot of layers, if you needed to get stuff approved, you went right to Tommy or Paul, and so it moved fast.

» [SNES] Before breaking into 3D, Acclaim's WWF games experimented with blue screen and motion capture technology.

As the wrestling industry reached its peak in the late Nineties, did your budgets increase with it?

Absolutely, you had to because the technology was changing so fast. If you'd come out with a sequel to *In Your House* when everyone else was doing 3D, you'd lost. Acclaim was really good at seeing the wood for the trees. They gave you what you needed to stay in front of the curve, because it changed all the time. I started out in 8-bit and 16-bit, then all of a sudden you were in Ultimate, next thing you know you were in 3D motion capture, all in a matter of three to four years – rendering one thing obsolete when another thing became the new panacea.

How did you end up actually joining the WWE?

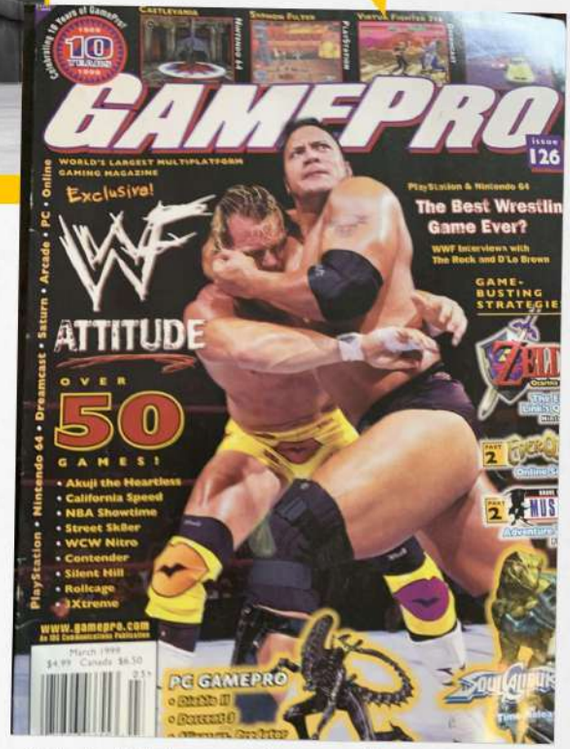
I'd interviewed with them a few times in the past, but it just wasn't the right time. One of the last times, I met with Shane McMahon – we had a long talk and we were very like-minded. At the time, Shane was still a talent so you didn't really get to him a lot until like late afternoon on a Wednesday. I got a hold of him one day and we were talking, but I got paged over the PA system. He goes, 'Are you going to take that?' and I go, 'No, I'm in with the boss!' His assistant knocked on the door and she said, 'Mike, it's your brother. Your father is sick.' So, Shane says, 'Go, go take it.' So, I'm on the phone with my brother, trying to figure out what's what. I come out and I go back to his office, and his assistant said, 'He had to run to another meeting, but there are two plane tickets waiting for you and your brother to wherever you need to go to be with your father.' I was just blown away. You just think, 'I'll work for that person any day of the week.'

At WWE, were you still hands-on with videogames like *WWE SmackDown Vs Raw*?

You had to be. I didn't do as much with the developers, but I spent a lot of time with THQ, reviewing things and making sure we were on track. *SmackDown* was our big legacy title, and for a few

» [Xbox 360] Mike's work with the WWE Legends programme brought some of the company's most decorated veterans back into the 'family'.

> "Acclaim was really good at seeing the wood for the trees. They gave you what you needed to stay in front of the curve, because it changed all the time"
> Mike Archer



» In the mid-to-late Nineties, pro wrestling became a pop culture phenomenon, and, like Mike says, 'A rising tide lifts all boats.'

years there, it just went gangbusters. And there were other games that you needed to pay a lot of attention to – they had a very aggressive strategy of a different wrestling product per hardware system. At the time, they were releasing a game almost quarterly, because their strategy was to put out *WrestleMania* for Nintendo, *SmackDown* for Sony and *Raw* for Xbox, so you were constantly deluged with stuff.

It must've helped that you had such an intricate understanding of the development process?
Absolutely, one of the things that I used to have people do when we did motion capture was we'd have talent come in and we had a 'talent appreciation day', where everybody who wasn't talent would just fall once on the crash pad. You'd go, 'Look, keep that in mind every time you say, "Wait I need them to do this again." Can you fix it, or you really need him to take that fall again?'

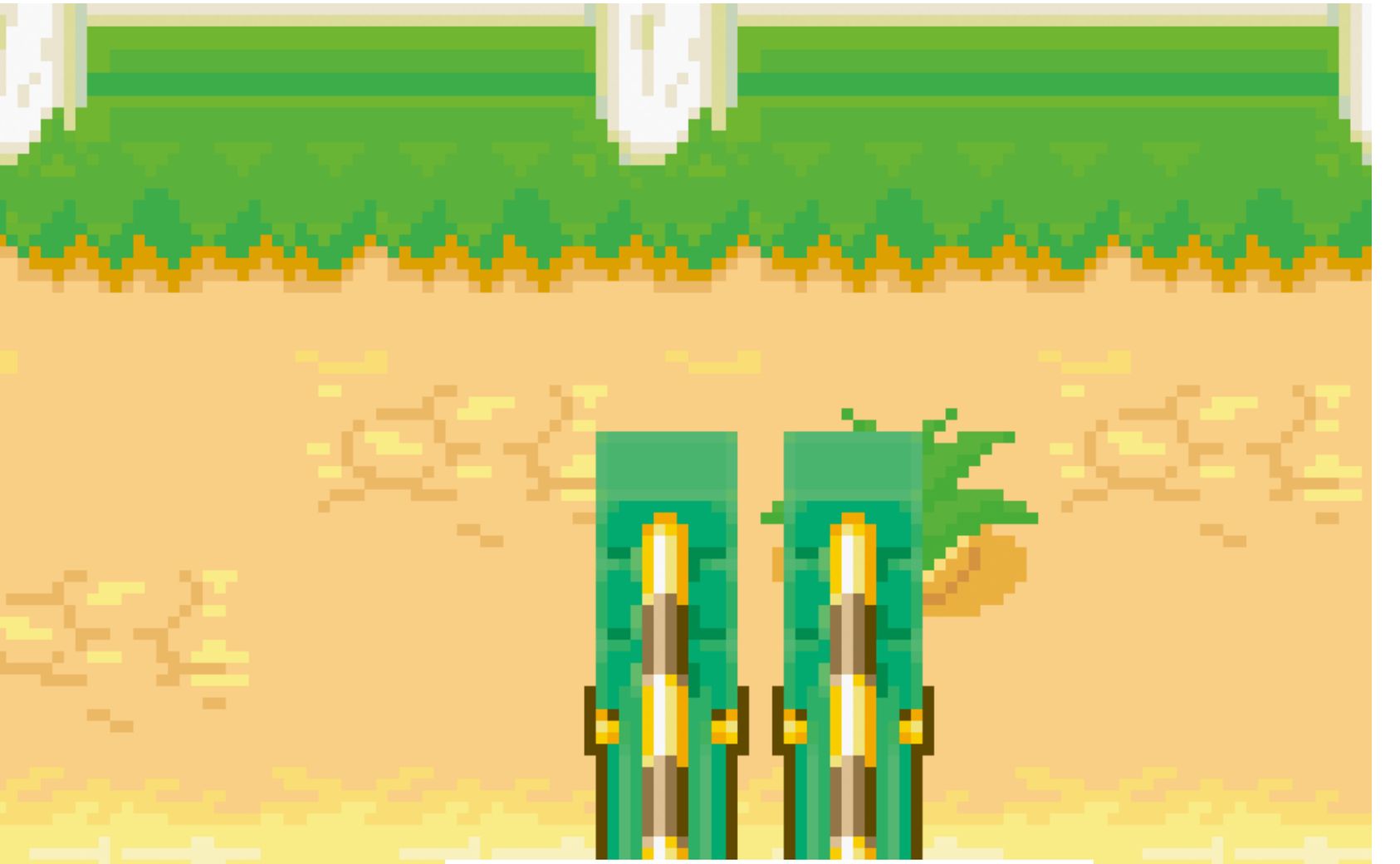
What was the story behind the mobile game, *WWE Immortals*?
I met a few guys from Warner Bros – they recognised the brand, and they had some crazy talent. They might have shared some tech with *Injustice*, but man that was neat – that was a fun game to make. One of the main things you always worried about, and why WWE games didn't really translate over to mobile, was because of the control systems. You've got to be able to drag and pull and push, grab a hold, and it's stop and start. So, we were starting to move outside of the ring, just so we could get into other consoles.

But you did experiment with social gaming...
I don't know if you remember the *FarmVille* and *Mafia Wars* games, we were definitely investigating them. But it didn't really hit our fanbase – like at the core, when we saw who was playing *FarmVille*, it was like the 45-year-old woman taking some time out of her busy day to just feed her pigs – so it wasn't a crossover for us. But we did spend some time and energy looking at the MMORPG craze, too. When you looked at it from the outside, it looked unbelievably lucrative. We also went through it with music games. The one thing about doing a music game, or an MMORPG, is the upfront cost is ridiculous. For music, you're dealing in music fees, licences and plastic, and then you eat up shelf space, because it's a bigger item. And with MMORPGs, you have servers that are playing online in real time, and you have to feed that beast every single day.

After 15 years, why did you decide to move on from WWE?
15 years is a long time. You go, 'Alright, I have to start looking for a new challenge.' Once I brought in 2K Games, it was another one of those mad scrambles because THQ announced bankruptcy in November and I had a new partner in place by January. It was very fast, very fluid, but started to feel like wash, rinse, repeat for me. WWE was great on my way out, I went out on my own and did a few consulting jobs, trying to recharge my batteries.

Tell us about your latest project, *RetroMania*...
Two years ago, Retrosoft owner Mike Herman reached out to me and asked if I'd like to do some consulting on his wrestling game, *RetroMania*. The game is going to be simple. I worked on *SmackDown Vs Raw* for many years, and it was always the same complaint – when you're a casual guy, you want a button-masher, but when you're a guy who knows the industry, you want something more intricate. We're really excited, it's going to have numerous backgrounds and some interesting and eclectic talent. It kind of calls back to the 8-bit days, where you had the SNES and the Genesis, and everything was a lot simpler. It has a really cool feeling to it.

» [GameCube] When Mike first joined WWE, the company pursued an aggressive strategy of frequently releasing one game per console, such as *WWE Day Of Reckoning 2* for GameCube.



Hamtaro: Ham-Ham Games

BIRD AND HAMSTER IN PERFECT HARMONY

» Game Boy Advance » 2004 » AlphaDream

If I don't look like the type of person who would knowingly buy a game featuring cute hamsters taking part in an Olympics-style competition, it's because I'm not. I didn't willingly purchase *Hamtaro Ham-Ham Games*; it simply arrived in a bundle with around 26 other GBA games that I bought on eBay about ten years ago.

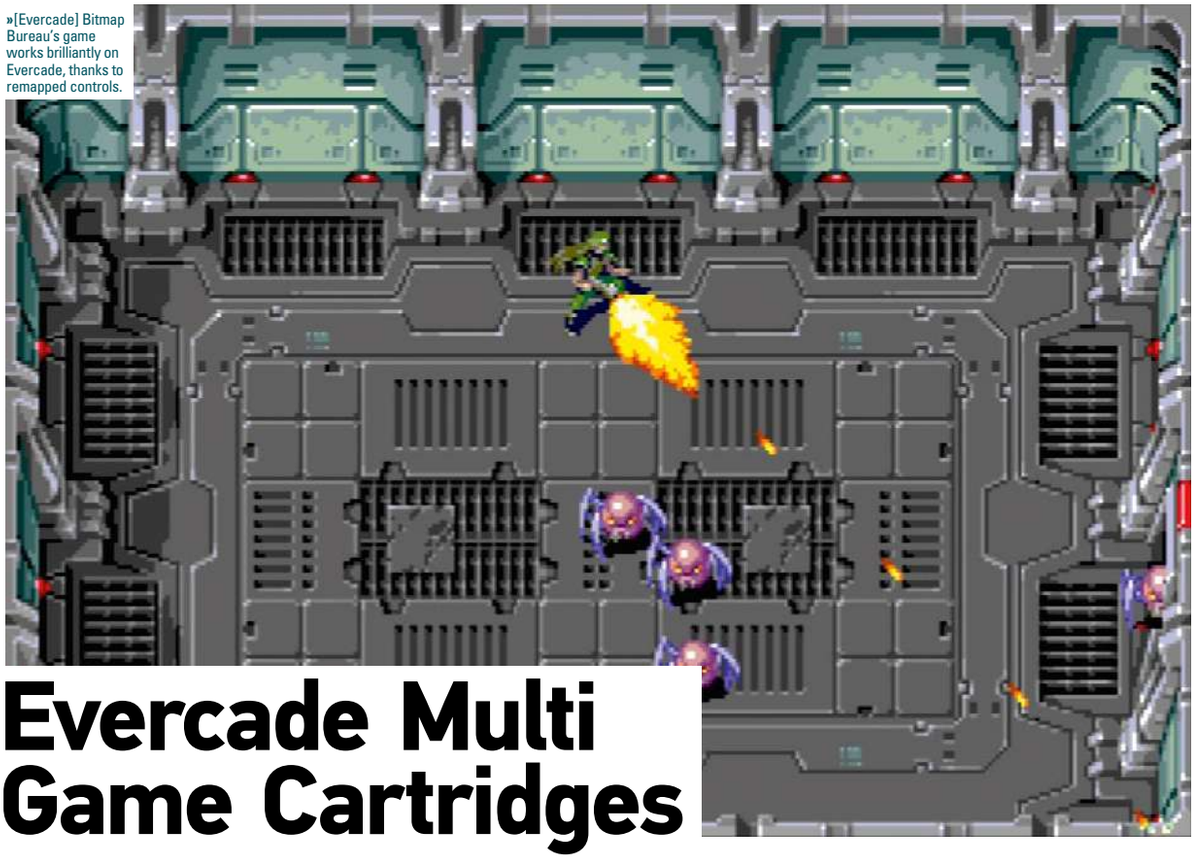
I've gone back to it many times over the last decade, and if I'm honest, I still don't really know what to make of AlphaDream's strange game. It's clearly marketed at kids and those familiar with the *Hamtaro* licence (of which I am neither), and yet some of the events require complicated controls and strict timing which seem beyond the youngsters it's aimed at.

I think the main reason I've never knocked it from my collection is because of the sheer charm the game exudes. Hamtaro himself is lovingly recreated and looks adorable as he runs around the various sports arenas or competes in events, while a strong use of colour and smart animation helps accentuate the overall charm.

And then, of course, there are the games themselves, which range from typical sports events like tennis, hammer throwing and archery, to more unique offerings, including synchronised swimming, the carrot pull and bird-back riding. As you might have guessed from the featured screenshot, that final event is one of my favourites. Bird-back riding requires you to climb on the back of your avian steed and steer it around a course of ordered jumps in as quick a time as possible. It's needlessly hard due to how difficult it is to line up certain jumps and the general lack of inertia your bird possesses, but it's such a surreal sight that it offers me no end of entertainment whenever I revisit it.

The only real downside to *Ham-Ham Games* is that you have to complete all the events in a truly dull story mode before you can access the unlockable freeplay mode. I'm unlikely to ever own any other *Hamtaro* games, but it's also highly unlikely that I'll ever sell this one, either.

>> This month we look at the four new Evercade cart compilations from Blaze, find out if the expensive Mario Kart Live: Home Circuit is worth your cash and examine two new retro-themed books. Enjoy!



»[Evercade] Bitmap Bureau's game works brilliantly on Evercade, thanks to remapped controls.

Evercade Multi Game Cartridges

ARE THE FIRST EVERCADE CARTS SINCE THE CONSOLE'S LAUNCH WORTH THE WAIT?

INFORMATION

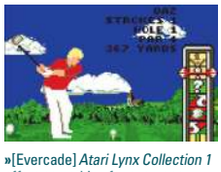
- **FORMAT** EVERCADE
- **RELEASED:** OUT NOW
- **PRICE:** £14.99
- **PUBLISHER:** BLAZE ENTERTAINMENT
- **DEVELOPER:** VARIOUS
- **PLAYERS:** 1

The first set of post-launch Evercade Multi Game cartridges are now with us, so let's look at them all at once. The included compilations are *Xeno Crisis/Tanglewood*, *The Oliver Twins Collection* (11 games), *Atari Lynx Collection 1* (17 games) and *Atari Lynx Collection 2* (eight games). All four cartridges retail for £14.99 and represent great value for money. We'll look at the things the carts all share in common, before delving into each one in a little more detail.

Firstly, the emulation across all featured systems (NES, Mega Drive and Lynx) appears to be very good indeed and we've noticed no real issues in how anything plays. There's still no option for scanlines or scaling options to prevent shimmer, which continues to baffle us, but hopefully Blaze will add them in a future update (some minor adjustments in the 1.3 update do improve things slightly, though). It would certainly be handy for the Lynx carts, as the games don't look quite as sharp when played on a TV, but that has not stopped us from enjoying them.

Presentation is largely uniform too, with the carts following the same design layout as the earlier releases. One nice touch for the *Xeno Crisis/Tanglewood* and *Oliver Twins* collections is they feature themed wallpapers, which are nice to look at. 18-page colour manuals are also included for each release, with the clear standout being the *Xeno Crisis* pack, as just two featured games allow for more detailed information to be shared beyond just the controls and a brief history. Weirdly, *Lynx Collection 2* features Mega Drive imagery for *Slime World* which seems a sloppy oversight (it's on the cart, too) but the overall presentation of the books is lovely and is bound to sit well with collectors. All four carts also feature the save and load states of previous games (though *The Oliver Twins Collection* strangely has them listed in a different order compared to the other carts).

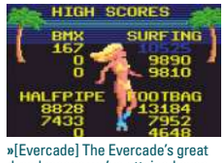
So let's look at the individual collections and see how each stacks up. The *Xeno Crisis/Tanglewood* pack may only feature two games but both are very good and should be in any Mega Drive owner's library. *Xeno Crisis* actually benefits the most here



»[Evercade] *Atari Lynx Collection 1* offers something for everyone, from sports fans to puzzle geeks.

BRIEF HISTORY

» The Evercade was released earlier this year and offers a cheap way of collecting classic games via a variety of officially licensed cartridges. All collections feature the same low £14.99 price point and some celebrate independent publishers like Mega Cat Studios and Piko Interactive, as well as big-hitters like Namco, Data East and Interplay. Blaze Entertainment continues to improve the handheld with various firmware updates, and three new cartridges (*Jaleco Collection 1*, *Piko Interactive Collection 2* and *Indie Heroes Collection 1*) are on the way. Arcade originals are also in the pipeline, too.



»[Evercade] The Evercade's great d-pad means we've attained even higher scores in surfing than we could on the Lynx original!

★PICKS OF THE MONTH

DARRAN

Atari Lynx Collection 2

It has *Blue Lightning*, *California Games* and *Chip's Challenge* on it, of course I've been playing it more than any other game.

DREW

Return Of The Obra Dinn

An awesome retro-looking puzzler. I picked it up in a recent sale, and it pretty much consumed my entire life for a couple of weeks.

»[Evercade] The presentation is largely similar to past Evercade carts, although two of the packs add arty borders.

as its new bespoke control system makes it far better to play than on a Mega Drive due to the Evercade's diamond button layout. *Tanglewood* is great fun too, offering a solid mix of platforming and puzzling, and the two games make for an enjoyable double act. It's significantly cheaper to play both games on Evercade, too, compared to the original carts, which is a big bonus.

The *Oliver Twins Collection* is up next and it nicely highlights one of the key strengths of Blaze's handheld – the ability to discover hidden gems. Three previously unreleased *Dizzy* games (*Mystery World Dizzy, Panic Dizzy* and *Wonderland Dizzy*) are included, along with the spin-off platformer *Dreamworld Pogie*. Granted, some were released on now-unavailable NES carts, but it's absolutely brilliant (as Codemasters would say) to have them all in one place. *Dreamworld Pogie* is arguably the weakest of the four, but is still decent. The rest of the collection is more of a mixed bag. *Treasure Island Dizzy* is easily the weakest of the seven *Dizzy* games, *BMX Simulator* is a fun racer, but is let down by its loss of multiplayer, while *Super Robin Hood* is an okay adventure game. *FireHawk* is a nice little shooter, and not one we've experienced before, *Go! Dizzy Go!* is an entertaining

»[Evercade] Retroguru's *Xump* is an entertaining puzzler that wasn't available during the Lynx's commercial lifespan.

»[Evercade] While not as slick as *Xeno Crisis*, *Tanglewood* remains a great game. It's perfect for platformer fans who crave more depth.

puzzle game, while *The Fantastic Adventures Of Dizzy* and *Dizzy The Adventurer* are everything you'd expect from great *Dizzy* releases.

The Lynx collections are equally interesting, as there has been no official representation of Atari's console since it ceased production. *Atari Lynx Collection 1* features several games by Songbird Productions, and like *The Oliver Twins Collection*, boasts titles like *Remnant: Planar Wars* and *Xump*, which were released after the console's natural lifespan. Due to the sheer number of games, it features a few titles that could be considered as 'filler', but there are more than enough genuinely enjoyable titles to still justify your £15. It's easily the most diverse collection too, offering everything from sports (*Jimmy Connor's Tennis, Awesome Golf, BasketBrawl, Malibu Bikini Volleyball*), puzzlers (*Crystal Mines II: Buried Treasure, Ishido: Way Of The Stones, Xump, Super Skweek, Loopz*), action (*Power Factor, Cybervirus, Super Asteroids/Missile Command, Remnant: Planar Wars*), platformers (*Scrapyard Dog, Gordo 106*), and an adventure game in the form of *Dracula: The Undead*. The final featured game is the 2008 release *Megapak Vol 1*, which features a quirky collection of minigames but is unlikely to hold your attention.

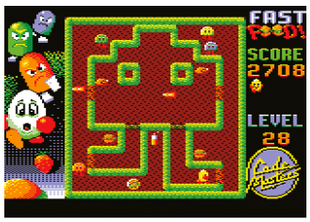
Atari Lynx Collection 2 is the final cart and boasts a strong selection of titles across its eight games. The shooters *Gates Of Zendocon* and *Zarlor Mercenary* are the weakest links due to the monotony of the former and high difficulty of the latter, but we still managed to waste plenty of time on them. *Chip's Challenge* remains a terrific puzzler, *Checkered Flag* is a challenging racing game with a lengthy campaign mode, and *Blue Lightning* and *Electrocop* are still great showcases for the Lynx's hardware capabilities, although the latter's control system feels far clunkier today. *Todd's Adventures In Slime World* is a wonderful adventure game that is only let down by the lack of multiplayer. And then, of course, there's the fantastic *California Games*, which remains as fun to play now as when the Lynx first launched. It's disappointing that none of the system's great arcade conversions make either cart, but that's our only complaint. ✱

In a nutshell

While some of the packs are certainly stronger than others, it's hard to grumble when the price of entry is so low. Here's hoping Blaze can keep this momentum going.

✱ WHY NOT TRY

▼ SOMETHING OLD
THE DIZZY COLLECTION (VARIOUS)



▼ SOMETHING NEW
NAMCO COLLECTION 1 (EVERCADE)

»[Evercade] It's the weakest *Dizzy* game by far, but its unreleased bedfellows make *The Oliver Twins Collection* historically important.

>> Score **83%**

>> Score **90%**

>> Score **85%**

>> Score **83%**

★ PICK OF THE MONTH

Mario Kart Live: Home Circuit

» **System:** Switch » **Buy it from:** Retail, online » **Buy it for:** £99.99

The latest game in the *Mario Kart* series sees the versatile plumber breaking into our own world via the magic of AR. While the end result isn't without issues, it still gives an exciting glimpse to where the popular franchise could head in the future.

If you're not aware already, *Mario Kart Live* is a clever take on the toys-to-life format and uses a cute well-crafted remote control kart that's fitted with a camera which transmits to your Switch's screen. In addition to the RC kart, the expensive starter pack also includes four numbered cardboard gates, a couple of cardboard arrow signs and a charging cable.

While we had a little trouble initially syncing our kart to our Switch, once set up it instantly connects with a quick button press. Setting up a track is simplicity in itself: you take your four numbered gates and place them around your room in whatever configurations you wish. Once placed, you drive around the room, passing through the gates, which creates your desired track. In a delightful touch, Lakitu throws paint onto your tyres, which is then used to mark out the track for the rest of play (or until you build another).

Although we couldn't test the multiplayer due to only having one kart, the remaining modes are still plenty of fun. Grand Prix has you racing against the Koopalings and features a large number of different course themes, which will affect your track in numerous ways, Custom Race lets you tweak to your heart's content, while Mirror Mode flips everything. The highlight, though, is Time Trial, which is terrific fun and led to us creating ever-more elaborate tracks. While racing around your home with Mario and friends makes for a rather magical experience, a number of little niggles stop it achieving greatness. The price, especially for multiplayer, is ridiculous, you'll need a large amount of space to get the most out of it and it lacks the immediacy of earlier *Mario Kart* games. Despite this, Velan Studios' ambition really must be applauded.

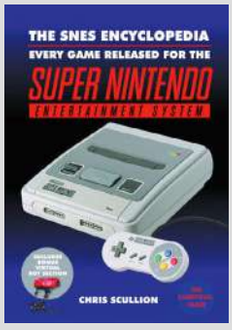
» Score **80%**

»[Switch] Numerous Mario tropes are transported into your living room and often make the course deadly, adding goombas, piranha plants and other hazards.

»We tried our kart on a variety of surfaces and it only had trouble on our shaggy rugs.

The SNES Encyclopedia

» **Buy it from:** pen-and-sword.co.uk » **Buy it for:** £24



Fans of Nintendo's 16-bit console will be interested to hear that Chris Scullion's second book has tackled all 780 western games and crammed them into 268 pages. The end result is an often funny and entertaining read which acts as the perfect primer for anyone that is planning on investigating the popular console. It's not perfect, though. The same old games are given the most space, meaning there's less chance to discover unknown gems, while the sheer number of titles covered means that some of the stamp-sized images are teeny-tiny. Other screenshots are quite dark and it's extremely hard to discern what's going on when viewing them. Despite these issues, there's no denying it remains a good read at a good price. The added bonus of 22 Virtual Boy games is a nice touch, and helps the book stand out from the competition.

Author Chris Scullion has contributed to **Retro Gamer** on a freelance basis

The Last Blade: Beyond The Destiny

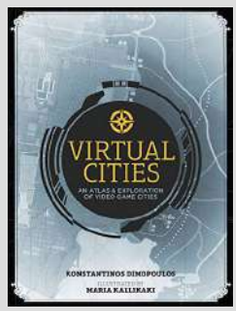
» **System:** Switch » **Buy it from:** Online
» **Buy it for:** £7.19

This game commands a hefty price in its Neo Geo Pocket Color form, and for good reason – it's an excellent miniaturisation of *The Last Blade*, with detailed backgrounds, recognisable music and a fighting system that packs plenty of strategic options. Better yet, there's a second story to experience as you unlock characters from *The Last Blade 2*. The collectable cards provide some replay value, local multiplayer is available and there are even a couple of minigames to unlock. Many players will likely prefer to pick up the *Arcade Archives* version of *The Last Blade 2*, which is slightly cheaper, but this is a fascinating example of how SNK made magic on limited handheld hardware, and it's worthy of examination on its own terms.

» Score **85%**

Virtual Cities: An Atlas & Exploration Of Video Game Cities

» **Buy it from:** amazon.co.uk » **Buy it for:** £22.60



If you've ever wondered how much work goes into creating the gaming world you're currently exploring, this new book from Konstantinos Dimopoulos will certainly be for you. It's a truly fascinating read that splits its cities into three categories: Fantasy, Familiar and Future. Konstantinos examines locations as diverse as Antescher (*Ant Attack*), New Donk City (*Super Mario Odyssey*) and Midgar (*Final Fantasy VII*), discussing them both as a visitor to each location and what makes them work from a technical standpoint. It's all finished off by some beautiful maps and imagery from Maria Kallikaki, which further adds to the atmosphere the book creates. A lack of developer input lets it down, but it remains an exquisite addition to your library.

Author Konstantinos Dimopoulos has contributed to **Retro Gamer** on a freelance basis

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HOT TOPIC

RETROBATES MULL OVER THE SCENE'S MOST INTRIGUING ISSUES

RETRO GAME PRICES

Team RG addresses the elephant in the room

DARRAN JONES

NICK THORPE

DREW SLEEP

Buying retro games isn't as cheap as it used to be. Everyone is cottoning on to the fact that there's money in old classics, which means getting games at a fair price is becoming harder and harder. Which begs the question: how much is *too* much when it comes to buying retro games?

DREW I think it's fair to say everyone plays by their own rules here!

NICK Yeah, I think there's a difference between 'too much' and 'the most I've ever paid'.

DREW It might have been Darran or John Szczepaniak who said they'd never pay more than the original RRP for a game, and that has kind of stuck with me. That's the closest I have to a solid 'rule'.

NICK I admit that approach cuts you out of a *heck* of a lot of good games.

DARRAN The other thing to keep in mind is everyone has their own limits to what they can justify spending. £20 might be somebody's £50 equivalent, or £100 equivalent and so on. I've seen people casually mention 'this cost me £1,100' and I've been like, 'Christ!, I could buy a lot of Lego with that.'

DREW If you're more prone to reselling games I think it's easier to take the wallet-hit. I think that might have informed some of the purchases you've made over the years, Daz. At one point, I thought it was like your equivalent of hoarding gold in your mattress!

NICK Everyone's circumstances are different. I couldn't justify that sort of money, even though retro games are my career as well as my hobby.

DARRAN Are *we* responsible for driving up prices?

NICK I think to some extent we have to be, but that goes for anyone covering older games. You highlight these things to people and demand will inevitably follow. So we're guilty, but no more guilty than say MetalJesusRocks.

DREW We're sorry if we've made *Turrican* prices go up this month, readers!

DARRAN But that's a good point, Drew. There are reissues of some of those *Turrican* games, which are now insanely expensive.

DREW There's a *Super Turrican* on eBay right now for just under £700!

NICK I'm actually all for that. I don't view my collection as an investment – if someone wants to reprint *Border Down* and make my copy less valuable, please do.

DARRAN I know some collectors look at reissues as nothing more than bootlegs, but they serve an important place in the collecting ecosystem. If I want to own *Super Turrican 2* I need to spend as much as £850. These reissues allow me to own the game for a fraction of the price and what's more, the IP owners are getting my money.

NICK I'm not ashamed to say I've picked up the *Shantae* reissue for Game Boy Color. I get to play the game in the format I want, and the right people get paid. That sounds good to me.

DREW I could not give a monkeys if it's a reissue or not. It still plays the same, and that's all that matters to me! I can dab any tears away with all the £50 notes I saved.

DARRAN One thing to keep in mind is ultimately it comes

» [Xbox 360] If you don't have a spare £100 to spend on *Radiant Silvergun*, there's a far cheaper alternative.

» [Xbox] Timing can be everything. Many Xbox games are still quite cheap, so now's a good time to start buying them.

» Darran tends to steer clear of them, but Nick will happily pick up a cartridge if it saves him significant cash over a complete copy.

Got an impressive collection of your own? Contact us at:

RetroGamerUK @RetroGamer_Mag retrogamer@futurenet.com

» The Evercade is another way to support publishers without having to spend insane amounts of money on the games you want.

» Drew paid £40 for *Persona 3 FES*. He's pleased to learn it's now worth much more.

» Certain genres will always command high prices. You'll pay even more if you buy games intoxicated, like Darran did with these two at £450.

down to what the market can accommodate. I might think £300 for a copy of *Panzer Dragoon Saga* is insanely overpriced, but if that's the going rate and I don't want an illegal copy, then that's the price I'll have to pay if I want to own it.

NICK If I want games like *Panzer Dragoon Saga, Earthbound* and *Shining Force III*, I'm going to buy the considerably cheaper Japanese copies and put the money I saved towards language tutoring.

DARRAN I guess another thing to consider is there might be an alternate version to play like *Radiant Silvergun* on Xbox Live Arcade. Granted, it's not a physical release, but it's considerably cheaper.

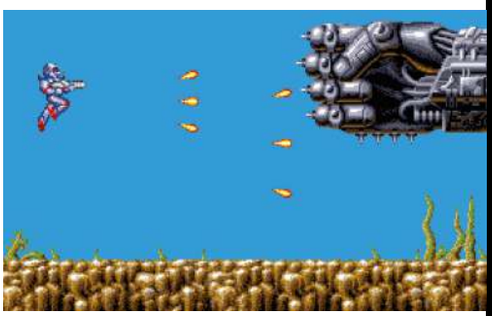
DREW I'm happy to just enjoy the digital versions on that front. I don't need *Wild Guns* on the Super Nintendo. …Do I?

DARRAN Yes you do. Get the Switch version, though. It's miles cheaper.

NICK And it has more content.

DREW And I just read that it has a dog with a drone!

DARRAN Sounds like you have your answer. ✱



» [Switch] Compilations like the incoming *Turrican* packs are a good way to save cash over expensive originals.

» Reissues are becoming big business and a good way of saving money. Retro-bit's new *Toaplan* series is proving very popular for this reason.

» [PlayStation] Low print runs and high demand means you'll be hard-pressed to get a complete PAL version of *Symphony Of The Night* for under £300. Yikes!

READERS REACT

What's the most you've spent on a game?

John Paul Sutherland
If it's something I really want, then I do pay triple figures for retro games. Certain game libraries (Neo Geo Pocket Color, I'm looking at you) almost demand it.

Martin
Probably up to £100, but so far the most is £80. But ultimately, there's nothing left I desperately feel I need so I'm lucky that way.

Dark Schuey
I feel like my (admittedly weird) limit is the original price of *Street Fighter II* on the SNES, which was about $130 AUD. The only game I've paid close to that was *Banjo-Tooie*. Everything else I managed to get before people lost their brains and the prices skyrocketed!

Dan Clews
The most I've paid is £350. I possibly would go higher, but I always like to feel I've got a good deal. It's definitely frustrating knowing you've missed out on games where the prices have gone sky high, though.

Pete Murphy
Personally, around £150 as a maximum. I bought *Dragon Force* and *Shining The Holy Arc* on Saturn for £140 total, and feel I got my money's worth. However, when there are no further ways of obtaining a game that goes for stupid money, that's where I feel repros have their worth.

8BitAndy
I've paid £250 for *Smurfs 2* for the Master System when I wanted to finish my collection about 12 years ago. I wouldn't pay that now. That's the single most expensive game I've ever bought.

Jae Cope
I spent £300 on *Panzer Dragoon Saga* on the Saturn only to have it sat there unplayed for years. I keep telling myself I will play it one day, but to be honest, I think I may be kidding myself. I feel guilty for spending that much.

DIFFICULTY

●●●○○

MEDIUM

FORMAT

» **GAME BOY ADVANCE**

HANDY HINTS

» Whilst soldering, wear a mask to protect yourself from toxic fumes.

» Flux is a kind of resin that goes onto the soldering point, and a lot of solderers use it whilst they work. We managed okay without it, although it probably helps the process.

EQUIPMENT NEEDED

» An original-model Game Boy Advance

» An IPS kit. Ours came with…

- IPS LCD screen
- Three wires
- Glass screen lens
- Insulation sponge
- Double-sided tape
- Two screwdrivers

» Isopropyl alcohol

» Cotton buds

» Precut GBA shell

» Soldering iron

» Solder

» Mask

HOW TO...

ADD A BACKLIGHT TO THE GAME BOY ADVANCE

Words By Mahin Kesore

Backlit Game Boy Advances can cost a fortune online but we're here to tell you that you can do it yourself for much cheaper. Of course, the Game Boy Advance SP has a backlit screen already, but some people prefer the nostalgia of an original GBA. Also, some people's hands aren't as tiny as they used to be, and the fit of this GBA model can be much better for larger mitts.

PHASE ONE: The Prep

There are many kits out there and we managed to find a cheap unbranded one on eBay which worked fine. If you're looking for something more trustworthy, RetroSix is a great brand worth looking into, and also FunnyPlaying is a good website to visit for those of you in the US. All GBAs will either be a 32-pin or 40-pin model. You can find out which one you have by looking just above your batteries under the battery cover to see if the number on there begins with a 1 or 0. If it's a 1, it's a 32-pin model, and if it's a 0, it's a 40-pin one. Most IPS kits have both options to connect to either model of GBA but this information is handy to keep in mind.

This mod doesn't actually need soldering to work. The soldering customisation, in fact, just enables you to control the level of brightness on your GBA, which is handy – especially in different light settings. If you don't wish to solder, most kits will keep the brightness somewhere in the middle of the highest and lowest settings.

It's important to note that we bought a precut shell, as the new IPS LCD screen does not fit in a normal Game Boy Advance without some editing, which we weren't keen on doing. With that all out of the way, let's start the mod!

PHASE TWO: The Hard Bit

We used the screwdrivers that came with our kit to open up the device. Once open, we used some cotton buds and isopropyl alcohol to clean the motherboard. This is a handy thing to do: if you're someone like us, who cringes at the idea of opening up a beautiful GBA, you're going to want to take this one chance to do the most you can to the insides without having to open your child up again. No parent wants to operate on their own kid repeatedly.

With the GBA open, you can get rid of that old casing and focus on the precut shell that will be your motherboard's new housing. You can choose to use the same buttons from your previous model or use a set of new ones which usually come with the case. Either is fine.

Now for the most nerve-wracking part. Removing the screen and putting in the new one has to be done swiftly and steadily. This was all done on the front panel of our precut shell casing. Applying the double-sided tape, putting the 3D-printed brackets in place, inserting the IPS LCD and affixing the front glass panel all have to be done in quick succession, with an emphasis on precision!

The reason this all has to be done reasonably quickly is to avoid any dust coming in between the screen, because once it's in there and you've finished the mod, it'll be that one spec of dust that comes between you and your gaming successes. Attaching the ribbon cable to the now-in-place LCD screen is pretty simple. They click together simply, and then the insulation sponge goes in between the screen and the ribbon cable.

Now is where the pieces of the puzzle start to come together. Remember how we mentioned replacing the screen was the most nerve-wracking part? Scratch that. *This* is actually the hardest part. Once the soldering iron is hot, it's time to start melting metal. We have some talented solderers on team **RG**, but your correspondent here has never soldered before, so this was an all-new experience. We'd be lying if we said we didn't burn the table a few times…

We started by soldering the wires onto the ribbon cable, then the point labelled SEL to TP2. Next, the motherboard needed to be put back into the shell so we continued soldering the ribbon cable point marked L to the point under the SW3 section. Then R went to the same point on the other side. This means when you hold Select, you can adjust the brightness using the L and R triggers.

Once everything was done, we attached the ribbon cable into the motherboard, put in some batteries and tested if the screen worked before it was time to close everything up and put the screws back in. We haven't seen anyone mention how difficult it is, but this next step is pretty fiddly! It seems plain and simple, but with all the new pieces in the device, it becomes a lot harder to close. We also soldered all the wires before figuring out the best way to have all the parts fit back into the GBA precut shell, so all the wires stuck out quite a bit, and so after a lot of trial and error, we finally managed to put everything together.

PHASE THREE: Testing It

Now that has been all done and dusted, we're proud to say that we're now the owner of a backlit GBA, which is just that bit more gratifying knowing we did it ourselves. We're pretty happy with the finished product, and we don't know if we're feeling dizziness from inhaling soldering fumes or if it's from all the stress this mod took to fit.

It plays perfectly and beautifully. It's even better than the screen in the Game Boy Advance SP, and even a little bit bigger. There is no going back once you've played on one of these. It's crazy to think the original came without a backlit screen. If you're using a clear GBA shell, you may slightly see the light from the screen glare through the see-through plastic but that is a minor complaint. One last observation here is it will sap through batteries quicker, but no pain no game!

Those without soldering experience will find this hard, but it is definitely doable. We're glad we managed to pull this mod off, and it makes us even more attached to our beloved console. If you find modding your GBA a daunting prospect, we would suggest purchasing a pre-modded console, but kudos to those of you brave enough to modify your own! *

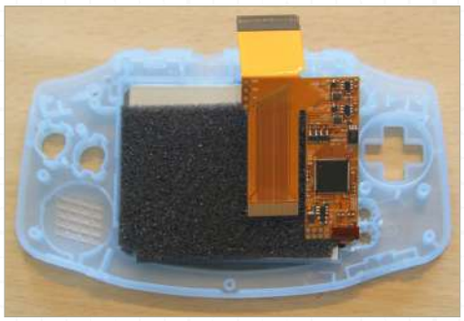
Something you'd like to see a guide for? Contact us at:

RetroGamerUK @RetroGamer_Mag retrogamer@futurenet.com

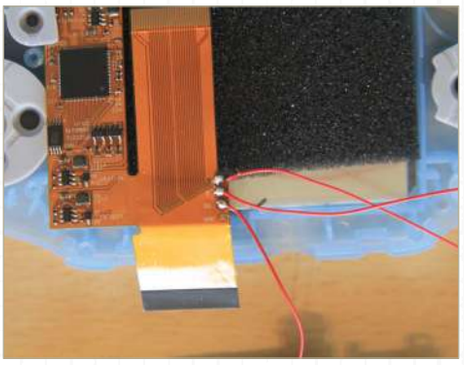
1 This is all the equipment needed for the mod to happen.

2 To see what model GBA you have, it's important to look just above the battery slot.

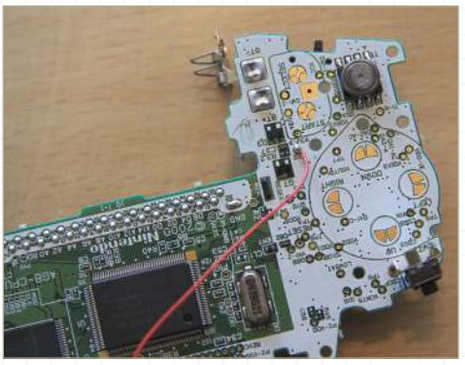
3 Unscrew the back of the GBA and it should look something like this.



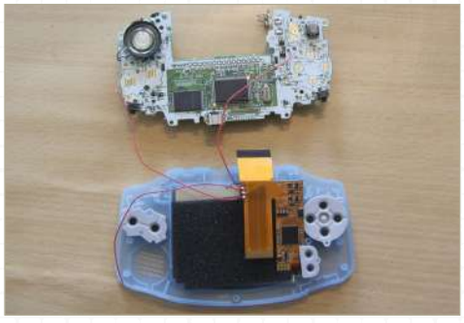
4 Next, install the new glass panel, double-sided tape, brackets, IPS screen, insulation foam and ribbon cable relatively onto the new precut shell. Make sure no dust falls onto the screen.



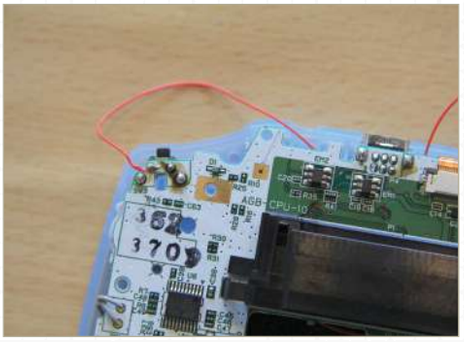
5 Solder the wires onto point R, L and SEL.



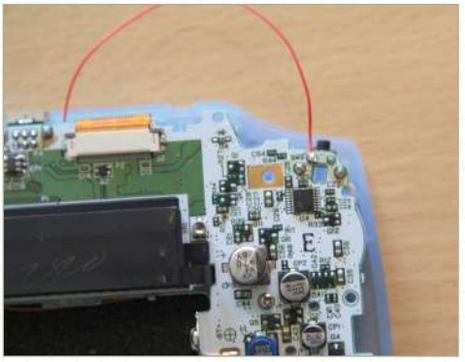
6 Next, solder the SEL wire to point TP2. This will enable you to hold Select to control the brightness.



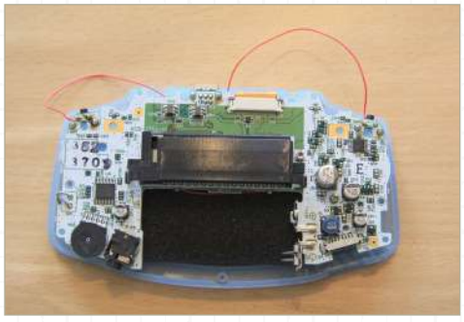
7 This is what the mod should look like so far. It's important to pay attention to what goes where. When you come to reassemble everything, it can be a nightmare to get the components back in neatly.



8 Place the motherboard into its new shell. Pictured is the point the R wire needs to be soldered onto. It ensures the right trigger decreases brightness.



9 This is the point the L wire needs to be soldered onto. It ensures the left trigger increases brightness.



10 After all the soldering is done and the motherboard is inside the new front precut shell, screw the back on and you've got yourself a backlit GBA.

11 This is the older Game Boy Advance, before the mod, with its old screen still in.

12 This is the modded GBA with its new IPS screen and new shell.

COLLECTOR'S CORNER

READERS TAKE US THROUGH **THE RETRO KEYHOLE**

JAGUAR AND JAGUAR CD

"I bought my first at launch and took 15 years to get the CD add-on. I bought a second one broken and repaired the regulator with the intention to mod the system, but I got one of the last Imagin Systems shells from the USA so I added that with a CD unit and fixed that with a custom bios. I love it with a skunk board."

PAID £150
JAG £150 CD

NEC LASERACTIVE

"Never ever seen one of these in the wild, but seen many Pioneer versions. I have two Pioneer models, but they are needy, so I normally have one in bits. It came with the packs, controllers, a CDX and a PC Engine Duo."

PAID: £1,000

N64 DD GAMES

"It's not a full set, but I have a good sample. I got these when collecting was not too expensive. I'm glad I did, as the price of these is the price of a small car today!"

PAID £300

HARDWARE HEAVEN

A collection that's absolutely packed

BIO

NAME:
Graham Packer

LOCATION:
Northamptonshire

FAVOURITE GAME:
3DO *Road Rash*

FAVOURITE SYSTEM:
Currently Dreamcast, but it changes monthly

COLLECTION VALUE:
Insured for £250,000

TWITTER: @retrohquk

We've often heard it said that a collection grows with the person collecting it and that's certainly true of our latest featured reader, who has amassed an extremely impressive selection of gaming systems. "I started collecting when I was eight years old," Graham Packer tells us, going on to say, "it was unknowingly at the time, as I just would not part with my systems." This refusal to part with his beloved consoles and computers has led to an eye-opening selection, which often contains multiples of the same system. "Most of the duplicates are of different regions," Graham continues, "especially the Mega-CD, but some have ODE mods fitted to them too, such as my Saturns".

Having a lot of systems takes up a large amount of space, of course, and Graham's extensive collection led to a fair amount of renovating that included converting his double garage, going into the roof and using two rooms. "I've also sneaked a cheeky pinball table into the lounge, so lots of space is used to my wife's dismay," he adds. Aside from potentially upsetting your spouse, one downside to owning a large number of different retro machines is keeping them in working order. "Big collections bring lots of maintenance," admits Graham. "I am struggling to keep up with recapping, especially with big machines like the LaserActive in my collection and learning each system's weak points and designs."

While Graham's favourite system does change on a regular basis, he's got a special love for Sega's Mega-CD and has a good amount of games and hardware. "It was my first CD-based console I paid for myself," he tells us. "With all these old machines I love the noise the motors make. The flashing lights and slow access times were amazing at the time and most people think FMV games are naff, but I thought they were amazing and I looked in awe at the video in the shop and watched the intros for ages."

While Graham does have a lot of games for many of his systems, he's not got any complete collections just yet. "I'm not really a complete set guy," he tells us. "I buy what I love. The Jaguar is not far off, but I collect mainly hardware first and software second. I think the price is a current put-off but I just love the hardware and fixing it." Those high costs are certainly something Graham feels need to be taken into consideration nowadays, and they're beginning to apply not just to games. "The cost has gone nuts over the last five years, especially hardware," he admits. "I am at a point where any items I now add to my collection are very expensive. I'm trying to get a PC Engine LT, but the prices are at a point that people are willing to pay well over the odds for a machine they don't even know works properly. The Jaguar games I am after are also twice the price they were three years ago. I wish I had collected more then."

And Graham does appear to have a soft spot for Atari's console, even going so far as to own one of the shells of the dental cameras that were made from the original mould. "Well the Jaguar hardware I found to be engineered beautifully and it has a game set that's not too big to collect for," he admits. "I like the history behind the console and still collect for it today." Collecting Jaguar games is now an expensive business though, so Graham's suggestion for those looking to build their own collections is to be a little more forward thinking. "I would suggest maybe starting with the Xbox 360 or PS3, he concludes. "They are both cheap to collect for, and will only go up [in price] in time." ✱

AIWA CSD-G1M

"A Sega Mega-CD variant. I bought this in bits and broken, so I took a gamble. With a lot of patience and a full cap replacement, it now works perfectly. Because it was such hard work, it holds a special place in my collection."

PAID £900

Got an impressive collection of your own? Contact us at:
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GREY SEGA SATURN

"A custom job. I have eight Saturns in total, including a developer unit, but I have a custom painted, region free ODE modded one that I love and play loads."

PAID £300

JEWEL IN THE CROWN

3DO BLASTER CARD

"This is in my vintage PC. It still brings hairs up on the back of my neck when I turn this bad boy on to see 3DO on my 21-inch CRT monitor. I love it."

PAID: £1,000 INCLUDING PC (BUILT MYSELF)

BARGAIN HUNT

Your guide to the rising world of retro prices

THE COVER STAR

TURRICAN

The *Turrican* series is all over the place when it comes to prices. A C64 copy of the original starts from **£7**, but you'll need a lot of money for the console releases as PAL copies of *Mega Turrican* and *Super Turrican 2* can reach prices of **£241** and **£886** respectively.

DAN DARE III: THE ESCAPE

This varies in price. We've seen the C64 version as low as **£5**, but the Spectrum and Amstrad versions can sometimes go as high as **£27**.

SKIES OF ARCADIA

This popular Dreamcast RPG remains pricey, and PAL copies range from **£50** to **£100**. The superior GameCube version is slightly pricier, ranging from **£60** to **£108**.

SILENT HILL: ORIGINS

Luckily, this newer game is still quite cheap with the PSP version available for **£10**. The same can't be said for the later PS2 edition which can reach **£80** for a sealed copy.

AXELAY

Carts for all versions of Konami's excellent shooter start at **£18**. Boxed copies tend to top out at **£120**, regardless of region.

JOHN MADDEN FOOTBALL

The extreme popularity of EA's game means it's a Mega Drive release that won't break the bank. You can get it complete for less than a **fiver**.

MOONSTONE: A HARD DAY'S KNIGHT

You're going to need deep pockets if you fancy adding this to your collection, as a recent complete copy sold for **£190**.

HOW MUCH?!

HAMMERIN' HARRY!

Nine bidders were desperate to own a complete version of Irem's hard-to-find game. Even though the seller marked it as 'very good' condition, it still ended up fetching a staggering **£1,500**!

Prices correct at time of print

GETTING BACK INTO GEAR

Why did Nick feel compelled to buy the Game Gear Micro?

When I was a small kid, I was fully bought into the Sega universe. I played my Master System for as long as I could secure the living room TV, I'd play the Mega Drive with my dad at weekends, and when I wasn't playing games I was reading the adventures of Sonic, Joe Musashi and the *Streets Of Rage* crew in *Sonic The Comic*. And as far as I was concerned, the Game Gear was the ultimate gadget.

It wasn't really about the games, though I will champion *Popils* to anyone who won't immediately run away, and I certainly felt hard done by when *Sonic Triple Trouble* didn't get a Master System release. What really thrilled me was the prospect of adding the freedom of portability to stuff I already loved. With the Master Gear converter, I could take any of my games out with me. If I got the TV tuner, I could watch something interesting while mum was watching *Home And Away* – anywhere in the house! In a world before tablets and smartphones, this was the entertainment device of my dreams.

Of course, that was beyond what my parents could provide back then, so my experiences with the Game Gear were fleeting moments at the homes of friends and relatives. I didn't own a handheld console until I got my Game Boy Color in 1999, and the Game Gear would be the last of the major Sega consoles that I picked up, well past its prime. Even then, my first one fell victim to the capacitor problems I wasn't aware of at the time, and was returned within two weeks. By the time I got my current console, the old dream was no more. Analogue TV broadcasts had been switched off, and I had no shortage of ways to play Master System games on the go – and all without the screen ghosting and battery-chomping that characterised the Game Gear.

But did that stop me assembling the setup of my dreams? Heck no. I was lucky enough to find a Master Gear converter for £4 in a local retro store, the gods having apparently decided that what I really needed was *another* way to play Master System games, and I later grabbed a TV tuner for all of £3. What do you do with a Game Gear TV tuner in this day and age? Well, what I did was pair it up with an AV cable and use it as a monitor for my Xbox 360 and my VCR, watching *ECW Hostile City Showdown 1996*. Why? For the same reason I bought a Game Gear cart that is essentially an image slideshow of Akira from *Virtua Fighter Kids* – because I can. This isn't just a novelty. This is a novelty so pointless that it's almost an affront to the technophile instincts that drew me to the Game Gear in the first place.

So when Sega conceived the Game Gear Micro, they might as well have had the design brief, "How do we sell a whole bunch of stuff to *this guy* in particular?" Between playing on my weird Game Gear fascination and tapping into my taste for the impractical, an instant preorder was secured for the Rakuten Books special edition, containing all four units and a set of pin badges. That's no small thing, either – bear in mind that I haven't been persuaded to pick up a PlayStation 5 or Xbox Series X at launch, and yet I happily dropped £230 on these four systems, which will only ever have 16 games, at least a quarter of which are far beyond my current level of Japanese comprehension. Oh, and that's before I got pummelled with shipping and import charges that added a good £90 to the final total.

You may be wondering if I'm suffering from buyer's remorse, and I can understand why you might imagine that to be the case. But to quote the great Tracy Jordan, "Regrets are for horseshoes and handbags." Never mind that the d-pads are a bit spongy, never mind that you really do need the little bit of magnification that the Big Window Micro provides, and never mind that they chew through batteries at the same speed as the original machine (though thankfully, only two AAA at a time). They're ridiculous little things and I love them.

The day my Game Gear Micros came in the post, I played *Sonic The Hedgehog* to completion. I was reintroduced to all of the game's subtle stage layout differences, as compared to the Master System game. Likewise, while the conversions of *Out Run* and *Gunstar Heroes* are obviously cut down compared to the originals, they have their own unique features and solutions to technical constraints that are worth exploring. Then there's stuff like *Baku Baku Animal* that I don't own elsewhere to enjoy.

I can see why Sega didn't release these outside of Japan – most players would want more games, a larger size and a rechargeable battery. But they've really hit the spot for me, and I'd go as far as to say that they've rekindled my love for the platform. I keep finding myself on eBay gauging the prices of games like *Pengo* and *Defenders Of Oasis* that didn't find their way to the Micros, despite the fact that I'm a bit skint between moving home and picking up Christmas gifts. Of course, I might just skip those and drop crazy money on the white *Aleste* Game Gear Micro. Sure, I could play the games on the Switch – but that's *sensible* talk, and when it comes to the Game Gear, I don't do sensible. ✱

TAKE MY MONEY!

OTHER UNLIKELY GAMING ITEMS I'D BUY ON THE SPOT

- 3DO MINI
- A DURABLE SOFT DANCE MAT
- DISASTER: DAY OF CRISIS 2
- HOUSE OF THE DEAD, PORTED ACCURATELY
- JUMPING FLASH VR
- MACHI, TRANSLATED INTO ENGLISH
- NEO GEO POCKET COLOR MICRO
- RIBBIT KING HD COLLECTION
- SHENMUE IV
- TOBAL ACTION FIGURES

WHY DOES A MAN WITH SO MANY MASTER SYSTEMS NEED TO COMPLETE SONIC ON A BATTERY-HUNGRY BRICK? BECAUSE HE CAN DO SO IN BED, OBVIOUSLY.
I'M SURE SABU AND ROB VAN DAM WOULD APPROVE OF MY DECISION TO WATCH THEM WORK ON A GAME GEAR, VIA A VCR. (OR, MORE LIKELY, NOT CARE AT ALL.)
BIG WINDOW
OF COURSE, THE GIANT BIG WINDOW DOES SOMEWHAT DETRACT FROM THE TINY SIZE OF THE CONSOLE, THOUGH IT'S SO PREPOSTEROUS THAT IT FITS THE GAME GEAR MICRO ETHOS PERFECTLY.
GIVEN THAT THE SCREEN IS ABOUT THE SIZE OF A STAMP, I FIND THAT THE BIG WINDOW DOES MAKE THINGS MORE COMFORTABLE TO LOOK AT DURING EXTENDED SESSIONS.

IF YOU'RE GOING TO DO IT, DO IT IN STYLE, RIGHT? IF YOU EVER MEET ME, LOOK FOR ONE OF THESE PIN BADGES ON MY JACKET – I USUALLY WEAR A FEW.
THE SCREEN IS THANKFULLY VERY CLEAR AND BRIGHT – THIS IS THE LOWEST SETTING AND IT'S STILL NIGHT AND DAY COMPARED TO THE NINETIES LCDS IN THE ORIGINAL MACHINES.
POPILS WAS THE BRAINCHILD OF THE LATE, GREAT FUKIO MITSUJI, AND I WISH IT WAS MORE WIDELY AVAILABLE BECAUSE IT'S ONE OF THE GAME GEAR'S BEST EXCLUSIVES.
RAKUTEN BOOKS ACTUALLY SENT THE CONSOLES SEPARATELY FROM THE PIN BADGES AND PRESENTATION CASE, SO UNTIL THEY ARRIVED, I WAS AFRAID I MIGHT NOT ACTUALLY GET THE CONSOLES AT ALL.
I'LL TAKE ANY EXCUSE TO TEAR THROUGH SOME OLD SONIC GAMES AND SMASHED ANCIENT'S GREAT 8-BIT INTERPRETATION ON MY VERY FIRST NIGHT WITH MY TINY NEW CONSOLES – WITH ALL THE CHAOS EMERALDS, OF COURSE.
IT'S ACTUALLY QUITE EASY TO FIND RCA-TO-3.5MM CABLES THAT WORK WITH THE GAME GEAR – I JUST CHOSE THE OFFICIAL CABLE BECAUSE I KNEW IT EXISTED AND THEREFORE HAD TO.
MY FULL-SIZE GAME GEAR, IN IT'S FULLY RECAPPED, 'TV CAPABLE' GLORY. HONESTLY, I NEVER FELT MY CONSOLE WAS COMPLETE WITHOUT IT.
MY PURCHASE OF THIS PARTICULAR WHITE ELEPHANT WAS DRIVEN BY A RIDICULOUS OBSESSION WITH VIRTUA FIGHTER AND A LACK OF JAPANESE KNOWLEDGE. OBVIOUSLY, NOW I NEED THE PAL VERSION TOO.
GAME GEAR
SEGA
A/V Cable
BIG WINDOW MICRO
GG ポートレート
KID'S GEAR

WOULD YOU GO MICRO?

Readers weigh in on Sega's divisive retro machines

GamesOnTwain
I love the fact that Sega is producing hardware in any capacity, however it is simply too small to be useful for me and my damned grizzly bear hands. If it was 50% to 100% larger and had more games, I'd be willing to spend a lot more on one. As they are, I have to pass. A novelty at best.

Gavin Storey
I bought the whole set of four. Perfectly playable in small doses, though I feel I need to learn more Japanese to really make the most of them.

SEGAbits
On paper it sounds impossible, but in hand, these things actually deliver on the promise of a playable tiny Game Gear. The Big Window accessory helps a lot, and M2 went the extra mile to add Easter eggs, fix bugs and improve performance of select games.

Tom Clark
If they'd stuck all the games on one Mini it would be a different story, but the way they've split them across multiple models rubs me the wrong way.

Matt Askham
The thing that put me off getting one is/was the Japan-exclusive release making the prices in Europe and the UK really high. I'd have gladly paid the $50 price for the novelty/nostalgia, but the scalpers and importers are really out in force with this one.

The Death of Retro Prime
I had one preordered but cancelled as it dawned on me that it really wasn't going to be practical to play games on.

MAILBAG

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STAR LETTER

STARTING YOUNG

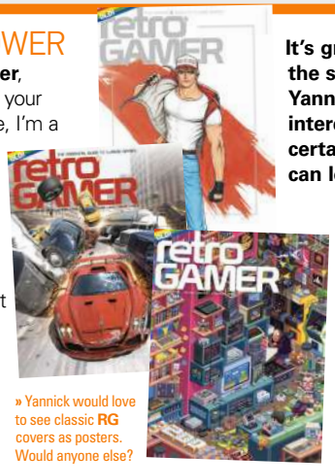
Dear **Retro Gamer**,
My name is Samuel and I have been enjoying your magazine for two years now, even though I am only a child. I love retro gaming and my favourite is *Sonic The Hedgehog 2* [Is that you, Nick? - Ed] and my favourite console is the Sega Mega Drive [It's definitely Nick – Ed]. My favourite issue so far has been the 16-bit wars one. I was hoping you could do an article on the *Phantasy Star* series, as I have played and liked all of them, except for number one [Okay... it's not Nick – Ed].
Yours sincerely,
Samuel Joys, aged 11

We're glad you enjoy reading the magazine, Samuel, and it's also wonderful to see that you have great taste in both *Sonic* games and consoles. We'll see if we have a suitable Sega-themed book to send you.

» [Mega Drive] Despite his young age, Samuel already realises *Sonic The Hedgehog 2* is the best *Sonic* game ever.

POSTER POWER

Dear **Retro Gamer**,
As a subscriber of your excellent magazine, I'm a big fan of your subscriber-only covers. I was wondering if you ever thought of making posters out of them? Most of them would look very great on my office wall! Please keep the good work going!
Yannick Labbé



» Yannick would love to see classic **RG** covers as posters. Would anyone else?

It's great to hear you love the subscriber covers, Yannick. If there's enough interest in posters, it's certainly something we can look at for the future.

FRESH HOMEBREW

Dear **Retro Gamer**,
Hello there. I've just finished a homemade game (a remake of a 1990 release called *Mad Mix 2*). I thought it could be of interest to **Retro Gamer** as a homebrew news item. You can play it at retromakes.itch.io.
Thanks in advance!
Jaume Bitterhoff

» [PC] If you like *Pac-Man* variants, you will enjoy Jaume's new game.

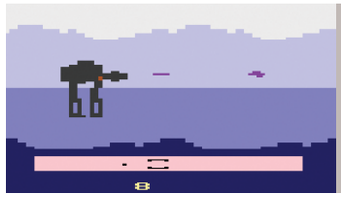
Thanks for notifying us, Jaume. There is no homebrew section in the magazine at the moment as Jason Kelk remains extremely poorly in hospital with COVID-19. We appreciate all the homebrew games being sent to us, though, and we're sure Jason will love to play them when he gets better.

FULLY CUSTOMISABLE

Dear Darran,
When I look back fondly at my Atari 2600 collection, I think it had one thing lacking from many modern titles – customisation.

Each game had options to modify it in different ways. Some were merely cosmetic, such as controlling different sprites, yet others were truly game-changing. Who can forget the homing missiles in *Combat*, for instance, or the solid walkers in *The Empire Strikes Back*?
Yours sincerely,
Stuart Hardy

That's a very interesting point you make there, Stuart. The PC modding scene is probably the closest we have now, but it's not really the same. Darran wants to start collecting Atari games now so he can tinker with them!



» [Atari 2600] Stuart enjoyed all the different gameplay modes on titles like *Star Wars: The Empire Strikes Back*.

» Videogame soundtracks are great for deadline day. Here are just some of the albums we listen to.

VINYL REVIVAL

Dear **Retro Gamer**,
I've been reading your magazine for years, and I'd love to see an in-depth article about videogame soundtracks, in particular a feature that focuses on the many vinyl releases that are now available. There are some great soundtracks available on vinyl, with companies like Mondo and Data Discs offering tremendous support. I'd love to read about how each vinyl is created, how the companies decide what games to focus on and which ones offer the best value for money. Game soundtracks appear to be everywhere at the moment, with even dedicated Spotify channels, so it would be great if you could cover them in a little more detail. I'd love a monthly report on the latest releases, for example.
Jason Smith

You're right, Jason, there's some great soundtracks available which are certainly worth covering. We tend to look at anything that's sent through to us and we also like the idea of the feature you mentioned. Maybe we'll do something in the new year.

WHY JUST GAMES?

Hey **Retro Gamer**,
Why don't you have a section of the magazine that covers other retro things, like movies, TV shows and toys? I think it would be a nice thing to have in the mag and it would be justified because, let's face it, if you like old games, you're bound to like old movies, old toys and old music as well. Maybe you could run a four-page article every issue. If you do, can you start with *MASK* because it's my favourite cartoon and

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toy line. The quality of your articles is always amazing, so I'm sure you'd create something brilliant.
Thanks in advance,
Matt 'Tracker' Harris

Hi Matt, it's highly unlikely this is something we'd ever do. A long time ago, we did an A-Z Of The Eighties and it did not go down well. We think we managed to get to the letter D before we abandoned it.

HANDHELD HEAVEN

Dear **Retro Gamer**,
I'd love it if the magazine could feature a dedicated handheld section each month. I'm a big collector of handhelds, from LCD games to Nintendo's Switch, and I've love to see this area of gaming represented more often in the magazine. I'd love to read a dedicated feature on the evolution of the Game Boy, read about the best arcade conversions for the Lynx, or the best retro compilations to be found on the Switch. It would be great to read about the making of *Super Mario Land*, discover how *California Games* and *Blue Lightning* were crammed onto the Lynx or a gallery simply showing off every single Game & Watch machine that was ever released. I know you do cover these systems in the magazine, but as handhelds are my favourites, I just want even more coverage.
Paul Baker

It's unlikely that we'd have a dedicated section devoted to handhelds, Paul, but we'll certainly cover them in the magazine whenever we get the opportunity. Speaking of which, if you're a fan of Rare's GBA update of its 8-bit classic *Sabre Wulf*, you might want to keep an eye out for next month's issue.

DISCUSSED THIS MONTH

Lockdown 2 and Jason Kelk

While it was perhaps inevitable that we would find ourselves in another lockdown, the reality of it has still been a tough one to deal with. The support we've seen from readers, both online, via emails and through new subscriptions has certainly made the last few weeks easier, and with any luck, nationwide restrictions will be lifted shortly. We'd like to take this opportunity to not only offer our sincere thanks, but to also remind you that Jason Kelk, our regular homebrew writer is still extremely ill with COVID-19, which is why that section remains on hold. If you could perhaps think of him the next time you send in a letter to us we're sure he would appreciate it. Stay safe, everyone.

» Darran cries when he remembers how many Game & Watches he used to own and sees what they now sell for.

Your say

Every month, Retro Gamer asks a question on social media and prints the best replies. This month we wanted to know…

What's your favourite run-and-gun game?

» [Switch] Simon Butler recommends *Blazing Chrome*. We back him up 100%.

Van Rockingham
Mercs on the Mega Drive has always been my favourite. The 'Original Mode' and 'Arcade Mode' were both different, and hot-swapping between different characters felt really novel to six-year-old me in 1991.

Rick Lindeman
Metal Slug 7. It has a lovely meta structure, which makes it more than just a run-and-gun.

Jae Cope
It has to be *Green Beret* on my C64. I don't know why, as it was hard as nails, but maybe because it was the Eighties and it fitted in with the films at the time.

Paps Schlumpf
Metal Slug 3 since I first played it in the arcade. The pixel art fascinated me.

Stephen Watts
Midnight Resistance. Classic game from the Speccy to Amiga. Brilliant visuals, awesome range of weapons and level design.

Ryan Pascall
Turrican 2. The level design was sublime and the variety offered by the inclusion of its shmup levels was genius.

Matt
Metal Slug and *Gunstar Heroes* will be the most cited, and rightly so. I guess nobody will talk about *Alien Hominid*… so here I am, putting *Alien Hominid* in this conversation.

Michael Burnside
Midnight Resistance. It was great fun being able to shoot in one direction and run in the other. And we mustn't forget *Smash TV*.

Jason Lawton
Bucky O'Hare is a quality run-and-gun game. It doesn't get the acknowledgment *Contra* or *Super Metroid* does, either.

Mega Dru
Contra III, one of my favourite SNES games. I remember getting hold of an import version before it reached the UK. Everything from the graphics to the boss fights, music and sound effects just felt so perfect. A truly iconic game, and definitely my favourite in the genre.

Roberta Davies
The Chaos Engine. It's also one of the few Amiga games I actually finished!

Simon Butler
Blazing Chrome. The best *Contra* clone around.

Ian Martin
Metal Slug series for me. I have all of them on original MVS carts. I love everything about them, from the graphics to the humour and the tight gameplay. Gaming perfection.

Thomas Touzimsky
Turrican 2. It's such a perfect showcase of what the Amiga was capable of at the height of its popularity. I still hum those tunes to this day.

Jesús Relinque
Game Over, a classical Spanish Eighties videogame for Spectrum, CPC and MSX. A masterpiece from Dinamic Software.

retro GAMER

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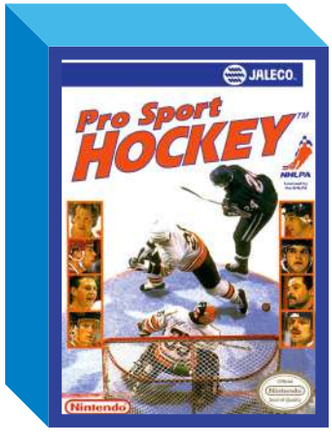


PRO SPORT HOCKEY

» Not too many people will have had the chance to play Pro Sport Hockey – new NES releases weren't exactly the hottest thing on the block in 1993, and the resulting slow sales mean that the game now fetches a high price in the usual places. With that in mind, showing off the ending is probably some kind of public service, so let's skip to that bit without further ado...

01

» Ice hockey is actually a pretty exciting sport – it's fast, it's easy to understand and sometimes the players end up punching one another. With that in mind, we're really not sure why it hasn't achieved more popularity in the UK.

02

» While there's no long cultural heritage with the sport here, people still pack out Wembley for NFL games, so what's going on? We'd guess that it's probably something to do with the difficulty of participating at a grassroots level.

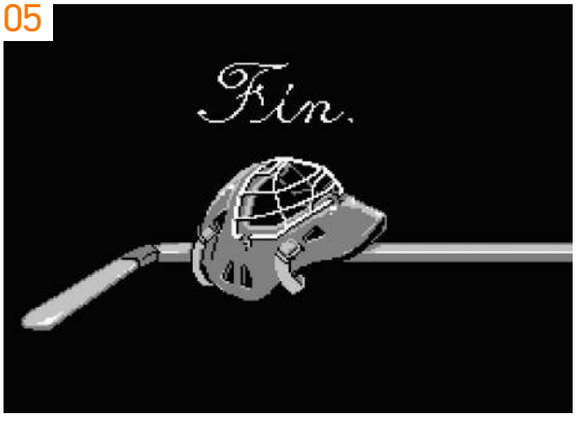
03

» Seriously, think about it. If you want to play football, all you need is a ball. For basketball, make it bouncier and add a hoop. We even used to pop out to the local tennis court with some cheap racquets in the summer.

04

» For ice hockey, all you need is a large field of ice, and two teams fully equipped with sticks and specialist footwear. That makes it slightly impractical, especially given that the temperate climate over here means you really need proper facilities, because you can't rely on the natural formation of ice.

05



» So kids don't get into hockey, and inevitably hockey games get overlooked as a result. That's a shame, because this one has some pretty nice art for its ending, especially those classy black-and-white shots – good job, anonymous TOSE artist. Anyway, maybe we should move to Sweden or something...

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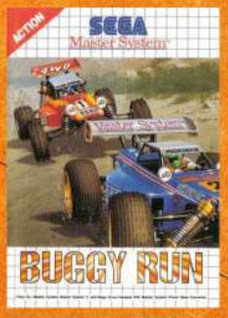

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